

SLE

Made Easy

Saudi License Examination

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**I offer my thanks to the colleagues who
helped me complete this book**

Note

This book is to help you, so any suggestions corrections, or new multiple choice questions should be directed to the author:

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Preface

The Saudi License Examination (SLE) is an exam designed by the Saudi Commission for Health Specialties (SCHS). This exam is mandatory for all physicians who want to participate in the joint postgraduate specialist program in Saudi Arabia or whom studied MBBS outside Saudi Arabia and they want qualify their certificates.

The SLE consists of 100 multiple-choice questions (MCQs).

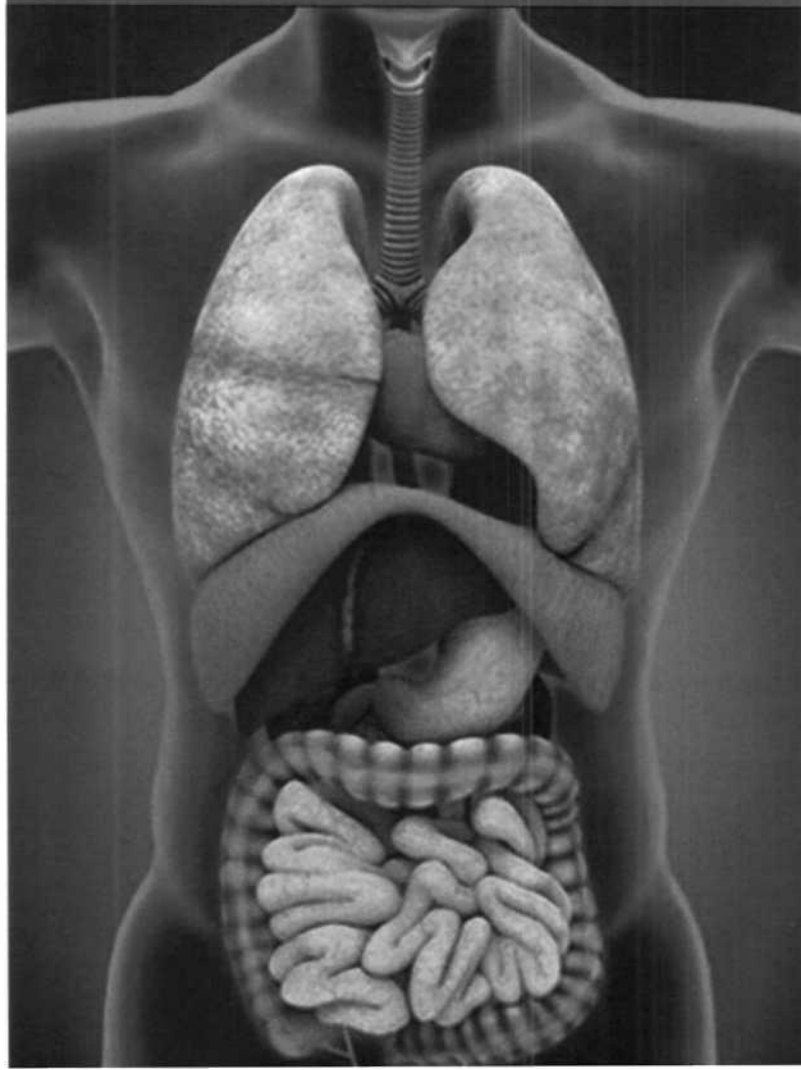
N	Category	MCQs
1	Basic science	3
2	Internal medicine	25
3	Family medicine	15
4	Obstetrics	5
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A passing grade is 50 of 100, but a higher score will give the doctor a better chance to join a postgraduate program.

SLE Made Easy contains more than 1,300 MCQs with their answers and explanations.

Author

INTERNAL MEDICINE



- (1) Which of the following medications is contraindicated in hypertensive patients who are using sildenafil?
- (A) Calcium channel blockers.
 - (B) Beta-blockers.
 - (C) Nitrates.
 - (D) Diuretics.
- (2) Which of the following is given as a prophylactic antiarrhythmic agent after myocardial infarction?
- (A) Procainamide.
 - (B) Lidocaine.
 - (C) Quinine.
 - (D) Metoprolol.
- (3) Which of the following drugs will increase the chance of survival of patients with heart failure?
- (A) Enalapril.
 - (B) Isosordil.
 - (C) Furosemide.
 - (D) Spironolactone.
- (4) A patient presented with chest pain, fever and arthralgia. He suffered a myocardial infarction 5 weeks earlier. What is the most likely diagnosis?
- (A) Dressler's syndrome.
 - (B) Meigs syndrome.
 - (D) Myocardial infarction.
 - (E) Pulmonary edema.
- (5) What would you expect to see in the ECG reading of a patient with inferior myocardial infarction?
- (A) Changes in leads II, ID and aVF.
 - (B) Changes in leads V1-V3.
 - (C) Changes in leads I, II and III.
 - (D) Changes in leads II and aVF.
- (6) Which of the following drugs interacts with carvedilol?
- (A) Warfarin.
 - (B) Digoxin.
 - (C) Thiazide.
 - (D) All of the above.
- (7) A patient presented with insomnia 2 months post myocardial infarction. What is the recommended treatment for this patient?
- (A) Zolpidem.
 - (B) Diazepam.
 - (C) Antihistamines.
 - (D) Nothing.

- (8) A patient presented to the ER with atrial fibrillation and a blood pressure reading of 80/60 mmHg. What is the recommended treatment for this patient?
- (A) Synchronized cardioversion.
 - (B) Digoxin.
 - (C) Heparin.
 - (D) Warfarin.
- (9) A patient with a known case of nephritic syndrome on angiotensin converting enzyme inhibitors. His food is usually rich with protein. What would you expect to see in the results of a lab investigation of the patient's blood?
- (A) Decreased serum albumin.
 - (B) Decreased serum triglyceride.
 - (C) Increased serum albumin.
 - (D) Increased serum triglyceride.
- (10) A middle-aged man presented to the ER with cyanosis. A chest x-ray showed prominent pulmonary arteries and vascular marking. What is the most likely diagnosis?
- (A) Ventricular septal defect.
 - (B) Atrial septal defect.**
 - (C) Coarctation of the aorta.
 - (D) Truncus arteriosus.
- (11) Which of following is an inappropriate method of managing a patient with myocardial infarction?
- (A) Calcium channel blockers.
 - (B) Nitropaste (transdermal nitroglycerin ointment).
 - (C) IV morphine.
 - (D) Beta-blockers.
- (12) A patient presented with chest pain persisting for 2 hours. ECG showed anterolateral lead ST elevation. Providing there is no percutaneous coronary intervention in the hospital, what is the best management plan for this patient?
- (A) Streptokinase, nitroglycerin, aspirin and beta-blocker.
 - (B) Nitroglycerin, aspirin, heparin and beta-blocker.
 - (C) Nitroglycerin, aspirin and beta-blocker.
 - (D) Alteplase, nitroglycerin, heparin and beta-blocker.
- (13) What type of edema occurs in congestive heart disease?
- (A) Alveolar edema.
 - (B) Interstitial edema.
 - (C) Both A and B.
 - (D) None of the above.

(14) What is the most common embolic etiology that leads to cerebrovascular accident?

- (A) Atrial fibrillation.**
- (B) Ventricular septal defect.**
- (C) Atrial septal defect.**
- (D) Cardiomyopathy.**

(15) An elderly patient with a known history of hypertension and benign prostatic hyperplasia. Which one of the following drugs may be recommended for the treatment of this patient?

- (A) Atenolol.**
- (B) Terazosin.**
- (C) Losartan.**
- (D) Phentolamine**

(16) A patient with a previous rheumatic episode has developed mitral stenosis with an orifice of less than 1 cm. What are the complications?

- (A) Left atrial hypertrophy and dilatation.**
- (B) Left atrial dilatation and decreased pulmonary wedge pressure.**
- (C) Right atrial hypertrophy and decreased pulmonary wedge pressure.**
- (D) Right atrial hypertrophy and chamber constriction.**

(17) Which one of the following is a component of Tetralogy of Fallot?

- (A) Atrial septal defect.**
- (B) Ventricular septal defect.**
- (C) Left ventricular hypertrophy.**
- (D) Aortic stenosis.**

(18) Which of the following describes the Fick method of assessing cardiac output?

- (A) Blood pressure.**
- (B) Oxygen uptake**
- (C) Carbon monoxide in blood.**
- (D) PCO₂.**

(19) What is the predominant clinical effect of niacin?

- (A) Decrease uric acid.**
- (B) Hypoglycemia.**
- (C) Increase LDL.**
- (D) Increase HDL.**

(20) Which of the following diets is recommended for patients with ischemic heart disease?

- (A) Decrease the intake of meat and dairy products.**
- (B) Decrease the intake of meat and bread.**
- (C) Increase the intake of fruit and vegetables.**
- (D) Decrease the intake of fruit and vegetables.**

- (21) Which of the following drugs is used for the treatment of congestive heart failure with systolic dysfunction?
- (A) Nifedipine.
 - (B) Diltiazem.
 - (C) Angiotensin converting enzyme inhibitors.
 - (D) Beta-blockers.
- (22) A 15-year-old boy came for medical evaluation before participating in a team sport. His brother died suddenly while walking to work due to a heart problem. On examination the boy appeared normal, with no heart murmurs and equal pulses in all extremities. What condition should be definitively excluded in this patient before he participates in any sporting activity?
- (A) Atrial septal defect.
 - (B) Ventricular septal defect.
 - (C) Bicuspid aortic valve.
 - (D) Hypertrophic cardiomyopathy.
- (23) A female patient with a known case of rheumatic heart disease with diastolic murmur presented to the ER with aphasia and hemiplegia. Which investigation should be carried out to determine the etiology of this stroke?
- (A) Magnetic resonance angiography.
 - (B) Non-contrast CT scan.
 - (C) Echocardiogram.
 - (D) ECG.
- (24) A patient presented to the ER with chest pain that radiated to the jaw, increased with exercise and decreased with rest. What is the most likely diagnosis?
- (A) Stable angina.
 - (B) Unstable angina.
 - (C) Prinzmetal angina.
 - (D) Musculoskeletal pain.
- (25) A 58-year-old male complained of shortness of breath that had persisted for 3 days. A chest x-ray showed cardiomegaly and pleural effusion and the analysis of this effusion showed mild protein < 30g/dl and moderate HDL < 200 IU/L contents. What is the most common cause of this effusion?
- (A) TB.
 - (B) Bronchopneumonia.
 - (C) Congestive heart failure.
 - (D) Hypoproteinemia.
- (26) Which of the following diseases will present with lower limb edema and neck vein congestion?
- (A) Right heart failure (right ventricular failure).
 - (B) Left heart failure (left ventricular failure).
 - (C) Pulmonary hypertension.
 - (D) Systemic hypertension.

- (27) Which technique could be used to differentiate between sinus tachycardia and atrial flutter?
- (A) Carotid artery massage.
 - (B) Temporal artery massage.
 - (C) IV injection of adenosine.
 - (D) Both A and B.
- (28) A patient who had been working outdoors in hot weather presented to the ER with clammy cold skin, hypotension and tachycardia. What is the most likely cause of this presentation?
- (A) Heat stroke.
 - (B) Heat exhaustion.
 - (C) Hypoglycemia.
 - (D) Heat cramps.
- (29) Which of the following lab results represents the greatest risk factor for ischemic heart disease?
- (A) Low serum LDL.
 - (B) High serum LDL.
 - (C) Low serum HDL.
 - (D) High serum HDL.
- (30) Which prophylactic antibody should be given to a dental patient with a history of endocarditis?
- (A) Amoxicillin 2 gm before the surgery.
 - (B) Amoxicillin 1 gm after the surgery.
 - (C) Clindamycin 2 gm before *surgery*.
 - (D) Clindamycin 1 gm after surgery.
- (31) A patient presented with increased jugular venous pressure, a low volume pulse, low resting blood pressure, pedal edema and no murmur on auscultation. What is the most likely diagnosis for this patient?
- (A) Constrictive pericarditis.
 - (B) Tricuspid regurgitation.
 - (C) Tricuspid stenosis.
 - (D) Pulmonary hypertension.
- (32) A 46-year-old male presented to the ER with moderate abdominal pain. The patient was known to have hypertension and hyperlipidemia, was a smoker and did not follow his medication instructions well. He was tall obese patient with stable vital signs and midline abdomen tenderness. What is the most likely diagnosis for this patient?
- (A) Marfan syndrome.
 - (B) Abdominal aortic aneurysm.
 - (C) Peptic ulcer.
 - (D) Gastroenteritis.

(33) An elderly patient who suffered a myocardial infarction 2 weeks previously and was discharged from hospital within 24 hours presents with sudden left lower limb pain and numbness. On examination the lower left limb is pale and cold, but the right limb is normal. What is the most likely diagnosis?

- (A) Acute artery thrombosis.**
- (B) Acute artery embolism.**
- (C) DVT.**
- (D) Cellulitis.**

(34) A patient with a known case of congestive heart failure likes to eat from restaurants 2-3 times weekly. Which of the following is the correct advice for him?

- (A) Do not add salt to your food.**
- (B) Eat no more than 4 gm salt per day.**
- (C) Eat a low fat and high protein diet.**
- (D) Eat a diet high in salt.**

(35) Which of the following statements is correct regarding cardiac syncope?

- (A) Gradual onset.**
- (B) Fast recovery.**
- (C) Neurological manifestations after it.**
- (D) All of the above.**

(36) An elderly man who regularly lifts weights presented to the ER with a severe headache. On examination, his blood pressure was found to be 150/95 mmHg; otherwise his examination was normal. While in the ER he became drowsy. What is the most likely diagnosis?

- (A) Subarachnoid hemorrhage.**
- (B) Central hypertension.**
- (C) Tension headache.**
- (D) Migraine.**

(37) An elderly patient with a known case of bronchial asthma and urine retention due to prostatic enlargement had a blood pressure of 180/100 mmHg. What is the most appropriate drug to control his hypertension?

- (A) Labetalol.**
- (B) Phentolamine.**
- (C) Propanolol.**
- (D) Atenolol.**

(38) A patient with left bundle branch block requires a dental procedure. When should the patient be given prophylaxis for endocarditis?

- (A) This is not necessary.**
- (B) Before procedure.**
- (C) After the procedure.**
- (D) Before and after the procedure.**

(39) A teacher diagnosed with aortic stenosis, fainted in the classroom. What is the most probable cause?

- (A) Cardiac syncope.
- (B) Hypotension.
- (C) Neurogenic syncope.
- (D) Hypoglycemia.

(40) Which one of the following would you expect upon auscultation of a patient with mitral stenosis?

- (A) Mid-diastolic low pitched rumbling murmur.
- (B) Mid-systolic low pitched rumbling murmur.
- (C) Holosystolic murmur.
- (D) Mid-diastolic high pitched rumbling murmur.

(41) Which one of the following congenital heart diseases is most commonly associated with endocarditis?

- (A) Ventricular septal defect.
- (B) Atrial septal defect.
- (C) Patent ductus arteriosus.
- (D) Tetralogy of Fallot.

(42) Which type of exercise is recommended for patients with coronary artery disease?

- (A) Isometric exercise.
- (B) Isotonic exercise.
- (C) Yoga exercise.
- (D) Dynamic exercise.

(43) A young obese patient presented to the ER with a headache. He gave a history of high salt diet intake. On examination; he was hypertensive and had a BMI = 33. What is the most probable cause of his hypertension?

- (A) High sodium intake.
- (B) High potassium intake.
- (C) High sodium and potassium intake.
- (D) Obesity.

(44) Which of the following drugs is contraindicated in hypertrophic obstructive cardiomyopathy?

- (A) Digoxin.
- (B) Beta-blockers.
- (C) Alpha-blockers.
- (D) All of the above.

(45) An elderly male patient presented to the ER with congestive heart failure and pulmonary edema. What is the best initial therapy?

- (A) Digoxin.
- (B) Furosemide.
- (C) Debutamine.
- (D) Spironolactone.

(46) A young patient with a known case of rheumatic heart disease and atrial fibrillation presented to the ER with dyspnea and productive, blood-tinged, frothy sputum. On examination, his cheeks were found to have a dusky rash. What is the most likely diagnosis?

- (A) Mitral stenosis.**
- (B) Aortic stenosis.**
- (C) Infective endocarditis.**
- (D) Congestive heart failure.**

(47) Which of the following drugs is used in the treatment of congestive heart failure?

- (A) Beta-blockers.**
- (B) Verapamil.**
- (C) Nitrates.**
- (D) Digoxin.**

(48) All of the following are true about coarctation of the aorta except:

- (A) A skeletal deformity will be seen on the chest x-ray.**
- (B) Upper limb hypertension occurs.**
- (C) Systolic murmur is present throughout the pericardium.**
- (D) Turner syndrome will be observed.**

(49) A patient presented to the ER with presyncope and tachycardia. He has a history of myocardial infarction. On examination, cannon a-waves associated with jugular venous pressure were observed. ECG showed wide QRS complexes. What is the most likely diagnosis for this patient?

- (A) Ventricular tachycardia.**
- (B) Pre-existing atrioventricular block.**
- (C) Anterograde atrioventricular block.**
- (D) Re-entrant atrioventricular nodal tachycardia.**

(50) Which of the following is true regarding pericarditis?

- (A) The patient will experience a sudden pain in the chest that increases with movement.**
- (B) The most effective diagnostic tool is ECG.**
- (C) The most effective diagnostic tool is the analysis of cardiac enzymes.**
- (D) The most effective diagnostic tool is chest x-ray.**

(51) What is the greatest risk faced by patients with atrial fibrillation?

- (A) Cerebrovascular accident.**
- (B) Myocardial infarction.**
- (C) Ventricular tachycardia.**
- (D) Ventricular fibrillation.**

(52) What is the pathology of coronary artery disease?

- (A) Fatty deposition with widening of arteries.**
- (B) Atherosclerosis with widening of arteries.**
- (C) Atherosclerosis with narrowing of arteries.**
- (D) Unknown.**

(53) A patient taking an antihypertensive drug presented to the ER with a painful big toe. Which drug is most likely to be responsible for this?

- (A) Hydrochlorothiazide**
- (B) Furosemide.**
- (C) Both A and B.**
- (D) None of the above.**

(54) A 15-year-old patient presented with palpitations and fatigue. Investigation showed right ventricular hypertrophy, right ventricular overload and right bundle branch block. What is the most likely diagnosis for this patient?

- (A) Atrial septal defect.**
- (B) Ventricular septal defect.**
- (C) Coarctation of aorta.**
- (D) Tetralogy of Fallot.**

(55) What is the best drug to prescribe a hypertensive patient who has liver cirrhosis, lower limb edema and ascites?

- (A) Hydrochlorothiazide**
- (B) Hydralazine**
- (C) Angiotensin converting enzyme inhibitors.**
- (D) Beta-blockers.**

(56) What is the recommended short term management plan for a patient with supraventricular tachycardia?

- (A) Adenosine.**
- (B) Beta-blockers.**
- (C) Amiodarone.**
- (D) All of the above.**

(57) A 60-year-old patient, newly diagnosed with hypertension comes for treatment. He has no history of diabetic mellitus, no history of coronary heart disease and no history of other diseases. What is the best first line treatment for this patient?

- (A) Angiotensin converting enzyme inhibitors.**
- (B) Angiotensin n receptor blockers.**
- (C) Diuretics.**
- (D) Beta-blockers.**

(58) What is the pathophysiology of hypertension?

- (A) Decreased sensitivity of baroreceptors.**
- (B) Increased peripheral vascular resistance.**
- (C) Decreased peripheral vascular resistance.**
- (D) Fibroid changes in blood vessels.**

(59) Which of the following is a true about normal ECG readings?

- (A) P waves are caused by atrial depolarization.**
- (B) P waves are caused by atrial repolarization.**
- (C) The QRS complex represents the time for ventricular repolarization.**
- (D) The T wave represents the period of ventricular depolarization.**

(60) A patient with a known case of hypertrophic subaortic stenosis was referred by a dentist before a dental procedure was carried out. Which of the following is true?

- (A) The patient has a 50% risk of infective endocarditis.**
- (B) The patient has a 12 % risk of infective endocarditis.**
- (C) There is no need for prophylaxis in this patient.**
- (D) Post procedure antibiotic treatment is sufficient.**

(61) A patient presented to ER with chest pain radiating to the back. On examination, decreased blood pressure in the left arm and an absent left femoral pulse was found. A chest x-ray show left-sided pleural effusion and an ECG show left ventricular hypertrophy. Which investigation should be carried out to help diagnose this patient?

- (A) Aortic angiogram.**
- (B) Amylase level measurement.**
- (C) CBC.**
- (D) Echocardiogram.**

(62) How does the heart increase its blood supply?

- (A) By increasing pulmonary resistance.**
- (B) By dilating coronary arteries.**
- (C) By constricting coronary arteries.**
- (D) By constricting the aortic artery.**

(63) A patient suffered a sudden cardiac arrest. An ECG showed no electrical activity, with oscillation of differently shaped QRS complexes. What is the underlying process for this ECG reading?

- (A) Atrial dysfunction.**
- (B) Ventricular dysfunction.**
- (C) Toxin ingestion.**
- (D) Abnormal metabolism.**

(64) Which of the following is true about unstable angina?

- (A) The definition includes a lowest grade of II and a new onset of less than 2 months.**
- (B) Usually there is evidence of myocardial ischemia.**
- (C) Patients should be given the same treatment as stable angina.**
- (D) Patients should be discharged when the chest pain subsides.**

- (65) A patient presented with a blood pressure of 180/140 mmHg. Which of the following is true about how quickly diastolic blood pressure should be lowered?
- (A) 110-100 mmHg over 12 hours.
 - (B) 110-100 mmHg over 1-2 days.
 - (C) 90-80 mmHg over 12 hours.
 - (D) 90-80 mmHg over 1-2 days.
- (66) Which one of the following is true about exercise?
- (A) Exercise decreases HDL level.
 - (B) Exercise increases CRP level.
 - (C) Exercise is not useful in reducing central obesity.
 - (D) Exercise should be carried out daily to produce beneficial effects.
- (67) A patient at risk of developing infective endocarditis is due to undergo urology surgery. The patient is sensitive to penicillin. What is the best form of prophylaxis for him?
- (A) IV vancomycin and IV gentamicin.
 - (B) Oral tetracycline.
 - (C) Augmentin.
 - (D) No needs to give prophylaxis.
- (68) A patient with a known case of posterior inferior myocardial infarction presented with sudden shortness of breath. What is the likely cause of this shortness of breath?
- (A) Pulmonary embolism.
 - (B) Acute mitral regurgitation.
 - (C) Acute aortic stenosis.
 - (D) Arrhythmia.
- (69) Which of the following is contraindicated in subaortic stenosis hypertrophy?
- (A) Digoxin.
 - (B) Dobutamine.
 - (C) Both A and B.
 - (D) None of the above.
- (70) What is the best treatment for hypertension caused by hyperaldosteronism?
- (A) Spironolactone.
 - (B) Angiotensin converting enzyme inhibitors.
 - (C) Beta-blockers.
 - (D) Amiloride.
- (71) What is the best treatment for hypertension associated with migraine?
- (A) Propranolol.
 - (B) Verapamil.
 - (C) Lisinopril.
 - (D) Furosemide.

(72) A 72-year-old carpenter visited the clinic for routine investigations. He gave history of death of one member of his family due to heart attack and he denied any history of chest pain or shortness of breath. On examination; he was well and fit and everything was normal, except a mid-systolic ejection murmur at the left sternal area without radiation to carotid. What is the likely cause of this murmur?

- (A) Aortic stenosis.
- (B) Aortic sclerosis.
- (C) Flow murmur.
- (D) Hypertrophic sub-aortic stenosis.

(73) An elderly patient presented with shortness of breath, orthopnea, paroxysmal nocturnal dyspnea, exertional dyspnea. Rales were found on auscultation. What is the main pathophysiology of these symptoms?

- (A) Left ventricular dilatation.
- (B) Right ventricular dilatation.
- (C) Aortic regurgitation.
- (D) Tricuspid regurgitation.

(74) A male patient diagnosed with a prolapsed mitral valve prolapsed requires a dental procedure. By investigation; Echo done for the patient with no abnormal finding. What is the recommended prophylaxis for this patient?

- (A) Give 2 gm amoxicillin one hour before the procedure.
- (B) Give 1 gm amoxicillin one hour before the procedure.
- (C) Give 2 gm clindamycin one hour before the procedure.
- (D) No prophylaxis.

(75) What is the greatest risk factor for cerebrovascular accident?

- (A) Diabetes mellitus.
- (B) Hypertension.
- (C) Family history of stroke.
- (D) Hyperlipidemia.

(76) A patient suffering from stable angina for 2 years presented to the ER complaining of palpitations. Hotter monitor investigation showed 1.2 mm ST depression for 1-2 of 5-10 minutes. What is the most likely diagnosis?

- (A) Myocardial ischemia.
- (B) Sinus arrhythmia.
- (C) Normal variation.
- (D) Aortic stenosis.

(77) What is the first line of treatment for an overweight (BMI = 28) patient diagnosed with hypertension stage I (BP = 140/85)?

- (A) Exercise and weight reduction.
- (B) Dietary pills.
- (C) Antihypertensive medication.
- (D) None of the above.

(78) Which of the following is the recommended diet for the prevention of ischemic heart disease?

- (A) Decrease the intake of meat and dairy.**
- (B) Decrease the meat and bread.**
- (C) Increase the intake of fruit and vegetables.**
- (D) Increase the intake of saturated fat diet.**

(79) A patient presented to the ER with paroxysmal nocturnal dyspnea and orthopnea. On examination he was found to have bilateral basal crepitation. A chest x-ray showed pulmonary edema. What is the most likely diagnosis?

- (A) Left heart failure.**
- (B) Right heart failure.**
- (C) Obesity and smoking.**
- (D) Obesity and hypertension.**

(80) A patient taking digitalis developed a sudden disturbance in his vision, yellow discoloration and light flashes. What is the likely diagnosis?

- (A) Digitalis toxicity.**
- (B) Retinal detachment.**
- (C) Glaucoma.**
- (D) Cataract.**

(81) Which one of the following conditions is least commonly associated with endocarditis?

- (A) Ventricular septal defect.**
- (B) Atrial septal defect.**
- (C) Patent ductus arteriosus.**
- (D) Tetralogy of Fallot.**

(82) Which of the following is the correct about unstable angina?

- (A) It should be treated with same drug as stable angina.**
- (B) It should be treated seriously as it might lead to myocardial infarction.**
- (C) It carries no risk of myocardial infarction or death.**
- (D) There is no need for treatment for this condition.**

(83) A patient with diabetes mellitus, hypertension and myocardial infarction was taking metformin and diltiazem and other medications, however, his creatinine clearance was high. What is the recommended management plan for this patient?

- (A) Add angiotensin n receptor blockers.**
- (B) Remove the metformin.**
- (C) Remove the diltiazem.**
- (D) Continue with the same medication.**

- (84) Which one of the following is not a risk factor for coronary heart disease?
- (A) Increased HDL serum level.
 - (B) Hypertension.
 - (C) Diabetes mellitus.
 - (D) Hypercholesterolemia.
- (85) What is the cause of premature ventricular contraction?
- (A) Decreased oxygen supply to the heart
 - (B) Increased oxygen supply to the heart (CO₂ poisoning).
 - (C) Both A and B.
 - (D) None of the above.
- (86) Which enzyme should be investigated in a patient who has suffered a myocardial infarction?
- (A) Creatine phosphokinase.
 - (B) Alkaline phosphatase.
 - (C) Aspartate aminotransferase.
 - (D) Amylase.
- (87) All of the following are correct about stable angina in the elderly except:
- (A) Stable angina lasts less than 10 min.
 - (B) Stable angina occurs on exertion.
 - (C) No enzyme levels will be elevated.
 - (D) Stable angina is associated with loss of consciousness.
- (88) What is the difference between stable and unstable angina?
- (A) Unstable angina causes necrosis of the heart muscle but stable does not.
 - (B) Unstable angina appears to be independent of activity level but stable is not
 - (C) Unstable angina is associated with seizures but stable is not.
 - (D) All of the above.
- (89) What is the most prominent sign of severe hypokalemia?
- (A) P-wave absence.
 - (B) Peak T-wave.
 - (C) Wide QRS complex.
 - (D) Seizure.
- (90) Which one of the following is a manifestation of hypokalemia?
- (A) Peaked T wave.
 - (B) Wide QRS complex.
 - (C) Absent P wave.
 - (D) Respiratory acidosis.

(91) A rheumatic fever patient has streptococcal pharyngitis. What is his risk of developing another attack of rheumatic fever?

- (A) 100%.**
- (B) 50%.**
- (C) 25%.**
- (D) 5%.**

(92) A patient presented to the ER with chest pain and shortness of breath, which was decreased by the patient leaning forward. On examination; friction rub and increased jugular venous pressure was observed. What would you expect to see on an ECG of this patient?

- (A) ST changes.**
- (B) Low voltage.**
- (C) Increased PR interval.**
- (D) T-wave inversions.**

(93) What is the recommended management for a patient with carotid bruit with occlusion 60% of the left carotid artery?

- (A) Aspirin daily.**
- (B) Angiography.**
- (C) Carotid endarterectomy.**
- (D) None of the above.**

(94) A patient presented with pedal edema. On examination he also had a low volume pulse and low resting blood pressure, with no murmur. What is the likely diagnosis?

- (A) Constrictive pericarditis.**
- (B) Tricuspid regurgitation.**
- (C) Tricuspid stenosis.**
- (D) Pulmonary hypertension.**

(95) Which one of the following should be avoided by a patient with hypercholesterolemia?

- (A) Red meat.**
- (B) Avocado.**
- (C) Chicken.**
- (D) White egg.**

(96) A 20-year-old patient presented to the ER with palpitations. On examination, his pulse was 300 bpm. ECG showed narrow QRS complexes. Which one of the following is true about his management?

- (A) Amiodarone should be included in the management.**
- (B) The patient requires CPR.**
- (C) Beta-blockers are contraindicated.**
- (D) Diltiazem is the first line of management.**

(97) A patient diagnosed with mitral valve prolapse by cardiologist had never been examined by echocardiogram before. He now requires a dental procedure. What is the appropriate action?

- (A) There is no need for prophylaxis.**
- (B) Ampicillin should be given as a prophylactic measure.**
- (C) Augmentin (amoxicillin clavulanate) should be given as a prophylactic measure.**
- (D) An echocardiogram should be carried out.**

(98) A 70-year-old male, newly diagnosed with hypertension, had a blood pressure of 170/105 mmHg. He had suffered diabetes mellitus since he was 20-year-old, with no history of myocardial infarction or any vascular disease. What is the most appropriate anti hypertensive drug to prescribe?

- (A) Angiotensin converting enzyme inhibitors.**
- (B) Thiazide.**
- (C) Calcium channel blockers.**
- (D) Beta-blockers.**

(99) Which drug will delay the need for surgery in aortic regurgitation?

- (A) Digoxin.**
- (B) Verapamil.**
- (C) Nifedipine.**
- (D) Enalapril.**

(100) What is the most common cause of death in patients with Ludwig's angina?

- (A) Sepsis.**
- (B) Asphyxia.**
- (C) Pneumonia.**
- (D) Wall rupture.**

(101) What is the most common cause of secondary hypertension in female adolescents?

- (A) Cushing syndrome.**
- (B) Hyperthyroidism.**
- (C) Renal disease.**
- (D) Polycystic ovary disease.**

(102) A patient presented to the ER with chest pain that was aggravated by coughing. On examination added sound on left sternal border was found. What would you expect to find in an ECG of this patient?

- (A) ST changes.**
- (B) PR prolongation.**
- (C) High voltage.**
- (D) Both A and C.**

(103) Which of the following antihypertensive drugs is contraindicated in an uncontrolled diabetic patient?

- (A) Hydrochlorothiazide.**
- (B) Losartan.**
- (C) Hydralazine.**
- (D) Spironolactone.**

(104) Which of the following drugs increase survival in patients with heart failure?

- (A) Beta-blockers.**
- (B) Angiotensin converting enzyme inhibitors.**
- (C) Digoxin.**
- (D) Nitrites.**

(105) An IV drug abuser presented to the ER with fever, arthralgia and conjunctival hemorrhage. What is the most likely diagnosis?

- (A) Bacterial endocarditis.**
- (B) Reactive arthritis.**
- (C) Polymyalgia rheumatica**
- (D) Systemic lupus erythematosus.**

(106) Which of the following statements about systolic hypertension is true?

- (A) It represents relatively little risk to the patient.**
- (B) It is defined as a systolic pressure >140 mmHg with a diastolic pressure >100 mmHg.**
- (C) It does not increase the risk of stroke.**
- (E) It is more dangerous in elderly patients than an elevated diastolic pressure.**

(107) Regarding myocardial infarction all of the following are true except:

- (A) Unstable angina and a longer duration of pain can occur even at rest.**
- (B) Stable angina and a shorter duration of pain occur with exertion.**
- (E) A Q wave should be observed in the ECG reading.**
- (D) Even if there is very painful unstable angina the cardiac enzymes will be normal.**

(108) A child was asystolic following CPR. Which drug should be given?

- (A) Atropine.**
- (B) Epinephrine.**
- (C) Lidocaine.**
- (D) Both A and C.**

(109) What ECG finding would you expect to see in a patient with acute pericarditis?

- (A) ST segment elevation in all leads.**
- (B) ST segment depression in all leads.**
- (C) Inversion of the T waves.**
- (D) The presence of normal Q waves.**

(110) To which of the following patients would you prescribe aspirin and dipyridol?

- (A) A patient with a history of myocardial infarction.**
- (B) A patient with a history of previous ischemic stroke.**
- (C) A patient with a history of peripheral artery disease.**
- (D) A patient who has undergone cardiac catheterization.**

(111) A patient with chronic atrial fibrillation who was taking 5 mg of warfarin daily came to the clinic for a follow up investigation. The patient's INR was 7, but there were no signs of bleeding. How would you treat this patient?

- (A) Decrease the warfarin dose to 2.5 mg.**
- (B) Stop the warfarin treatment and repeat INR next day.**
- (C) Stop the warfarin treatment.**
- (D) Continue the patient on the same warfarin dose and repeat INR next day.**

(112) An elderly patient felt dizzy and fell down one day ago. He has a history of epigastric discomfort. On examination, he was found to be tachycardic (HR= 130-140 bpm) and his blood pressure = 100/60mmHg. What is the likely diagnosis?

- (A) Peptic ulcer.**
- (B) Gastroesophageal reflux disease.**
- (C) Leaking aortic aneurysm.**
- (D) Gastritis.**

(113) An elderly patient presented with abdominal and back pain. On examination he was found to have a pulsatile abdomen. What procedure should be used to confirm the diagnosis for this patient?

- (A) Abdominal US.**
- (B) Abdominal CT.**
- (C) Abdominal MRI.**
- (D) Endoscopy.**

(114) Which of the following criteria would suggest a diagnosis of right bundle branch block?

- (A) A wide S wave in lead I and V6 and a wide R wave in VI.**
- (B) No Q wave in lead I.**
- (C) A small R wave in lead I and aVL and a small Q wave in lead II, in and aVF.**
- (D) Right axis deviation.**

(115) Which of the following treatments is contraindicated in asthmatic patients?

- (A) Non-selective beta-blockers.**
- (B) Nitrates.**
- (C) Anticholinergic.**
- (D) Beta-2 agonist.**

(116) A 30-year-old male patient with no known medical illness presented to the ER with a sudden attack of shortness of breath and left side chest pain. On chest percussion, was hyperresonance was detected on the left side. What is the likely diagnosis?

- (A) Spontaneous pneumothorax.**
- (B) Pulmonary embolism.**
- (C) Pneumonia.**
- (D) Ischemic heart disease.**

(117) How can allergic symptoms caused by dust mites be prevented?

- (A) Wash clothes with hot water.**
- (B) Keep the house humid.**
- (C) Give the patient antihistamines.**
- (D) Give the patient glucocorticoids.**

(118) Where is the genetic defect in cystic fibrosis?

- (A) The short arm of chromosome 7.**
- (B) The long arm of chromosome 7.**
- (C) The short arm of chromosome 17.**
- (D) The long arm of chromosome 17.**

(119) A male patient has acute respiratory distress syndrome. On ventilation, manifestations of pneumothorax occur. What is the likely cause?

- (A) Negative pressure ventilation.**
- (B) Lung damage.**
- (C) Central line insertion.**
- (D) 100% Oxygen.**

(120) In which lobe of the lung does pneumonia usually occur?

- (A) Right upper.**
- (B) Right middle.**
- (C) Right lower.**
- (E) Both B and C.**

(121) What is the most specific diagnostic investigation used to diagnose pulmonary embolism?

- (A) Ventilation-perfusion scan (V/Q scan).**
- (B) Pulmonary angiography.**
- (C) Chest x-ray.**
- (D) ECG.**

(122) Regarding right lung anatomy, which one of the following is true?

- (A) It has one fissure.**
- (B) It has 8 pulmonary segments.**
- (C) It has no relationship with the azygos vein.**
- (D) It has 2 pulmonary veins.**

(123) A patient presents with a history of recurrent pneumonia, productive cough with foul smelling sputum, hemoptysis and nail clubbing. What is diagnosis?

- (A) Bronchiectasis.**
- (B) Pneumonia.**
- (C) Lung Abscess.**
- (D) Chronic obstructive pulmonary disease.**

(124) An elderly patient was diagnosed with myocardial infarction and admitted to hospital. After 5 days of treatment, the patient developed shortness of breath and crepitation on both lungs. What is the likely cause?

- (A) Pulmonary embolism.**
- (B) Pneumonia.**
- (C) Mitral regurgitation.**
- (D) Aortic regurgitation.**

(125) An elderly bedridden patient suffered from confusion and fever. His blood culture showed enterococcus faecalis. What is the source this of infection?

- (A) Pneumonia.**
- (B) Urinary tract infection.**
- (C) Gastrointestinal tract.**
- (D) Bed sores.**

(126) A male patient with a known case of bronchial asthma that is well controlled by a salbutamol inhaler presented with a cough, dyspnea, chest tightness and wheezing with no response to salbutamol. What medication could be added to this patient's prescription?

- (A) Corticosteroid inhaler.**
- (B) Short acting beta-agonist.**
- (C) Oral corticosteroid.**
- (D) Theophylline.**

(127) A young patient with an unremarkable medical history presented with shortness of breath, wheezing and a long expiratory phase. What is the recommended initial management for this patient?

- (A) Short acting beta-agonist inhaler.**
- (B) Ipratropium.**
- (C) Steroids.**
- (D) Diuretics.**

(128) An 18-year-old patient with a known case of bronchial asthma was on a daily low dose of inhaled corticosteroids and a short acting beta2-agonist. What is the classification of this patient's state?

- (A) Mild intermittent.**
- (B) Mild persistent.**
- (C) Moderate persistent.**
- (D) Sever persistent.**

(129) An elderly patient who stopped smoking 10 years earlier was suffering from shortness of breath after exercise with no cough. The results of investigations were: FEV1 = 71%, FVC = 61%, FEV1/FVC = 95%, TLC = 58%. What is the likely diagnosis?

- (A) Restrictive lung disease.**
- (B) Obstructive with restrictive.**
- (C) Bronchial asthma.**
- (D) Emphysema.**

(130) A patient with a known case of chronic obstructive pulmonary disease presented with coughing up greenish sputum. What is the responsible organism?

- (A) Staphylococcus aureus.**
- (B) Streptococcus pneumonia.**
- (C) Mycoplasma.**
- (E) Haemophilus Influenzae.**

(131) A patient was diagnosed with pulmonary embolism, which was confirmed via a CT scan. What is the recommended initial therapy?

- (A) Heparin IV.**
- (B) Warfarin IV.**
- (C) Streptokinase.**
- (D) Embolectomy.**

(132) An elderly male patient presented to the ER with sudden chest pain and coughing up of blood. On examination, decreased chest wall movements were observed. An ECG showed SI Q3 T3. What is the most common diagnosis?

- (A) Acute MI.**
- (B) Pulmonary embolism.**
- (C) Severe pneumonia.**
- (D) Chronic obstructive pulmonary disease.**

(133) A young patient on anti TB medication presented with vertigo. Which of the following drugs is commonly responsible for this side effect?

- (A) Streptomycin.**
- (B) Ethambutol.**
- (C) Rifampicin.**
- (D) Penicillin.**

(134) A patient presented to the hospital with a cough, hemoptysis, dyspnea, weight loss, fever and chest pain. Chest x-ray revealed infiltration of the upper lobe of the right lung with pleural effusion. What is the diagnosis?

- (A) TB.**
- (B) Congestive heart failure.**
- (C) Hypothyroidism.**
- (D) Hypoproteinemia.**

(135) What is the characteristic symptom of miliary TB?

- (A) Spare lung apical.**
- (B) Septal lines.**
- (C) Multiple lung nodules.**
- (D) One large cavity in the upper lobe of the lung.**

(136) What is the most common cause of community acquired pneumonia in adults?

- (A) Haemophilus influenzae.**
- (B) Streptococcus pneumonia.**
- (C) Mycoplasma.**
- (D) Klebsiella.**

(137) A 17-year-old patient presented with dyspnea. Chest x-ray, blood P02 and blood PC02 were normal, while blood pH was increased. What is the likely diagnosis?

- (A) Acute attack of bronchial asthma.**
- (B) Pulmonary embolism.**
- (C) Pneumonia.**
- (D) Pneumothorax.**

(138) A patient on treatment for TB started to develop numbness in hands and feet. In which vitamin does the patient have a deficiency?

- (A) Vitamin B1 (thiamine).**
- (B) Vitamin B3 (niacin or nicotinic acid).**
- (C) Vitamin B6 (pyridoxine).**
- (D) Vitamin C (ascorbic acid).**

(139) Which of the following factors is most important to reduce the mortality rate in chronic obstructive pulmonary disease patients?

- (A) Home oxygen therapy.**
- (B) Enalapril.**
- (C) Smoking cessation.**
- (D) Oral steroid.**

(140) What is the most common cause of cough in adults?

- (A) Bronchial asthma.**
- (B) Gastroesophageal reflux disease.**
- (C) Postnasal drip.**
- (D) Pneumonia.**

(141) What is the term used to describe difficulty in breathing?

- (A) Dyspnea.**
- (B) Tachycardia.**
- (C) Bradypnea.**
- (D) Tachypnea.**

(142) An elderly patient with a history of ischemic heart disease presents with a pattern of breathing described as: a period of apnea followed by slow breathing which accelerates to become rapid breathing with hyperpnoea, tachycardia, followed by apnea again. What is this type of breathing known as?

- (A) Hippocratic breathing.**
- (B) Cheyne-stokes respiration.**
- (C) Kussmaul breathing.**
- (D) Paradoxical breathing.**

(143) Which of the following shifts the hemoglobin-O₂ dissociation curve to the right?

- (A) Respiratory alkalosis.**
- (B) Hypoxia.**
- (C) Hypothermia.**
- (D) Decrease 2,3-diphosphoglycerate.**

(144) What is the most common treatment regimen for a patient with community acquired pneumonia who is healthy and without risk factors?

- (A) Azithromycin.**
- (B) Fluoroquinolone.**
- (C) Penicillin.**
- (D) Gentamicin.**

(145) An elderly patient was diagnosed with pneumonia caused by Haemophilus influenzae. Which of the following antibiotics is the best treatment for this patient?

- (A) Cefuroxime.**
- (B) Penicillin.**
- (C) Ciprofloxacin.**
- (D) Ceftriaxone.**

(146) All of the following are side effects of prolonged 100% oxygen treatment, except:

- (A) Retrosternal chest pain.**
- (B) Seizure.**
- (C) Depression.**
- (D) Dyspnea.**

(147) A young male patient has known case of uncontrolled moderate persistent bronchial asthma and is on a beta-agonist inhaler. What is the recommended management for this patient?

- (A) Add a corticosteroid inhaler.**
- (B) Continue on the beta-agonist inhaler only.**
- (C) Switch to a leukotriene inhaler only.**
- (D) None of the above.**

(148) What is the recommended treatment for erosive gastritis?

- (A) Antibiotics.**
- (B) H₂-blockers.**
- (C) Total gastrectomy.**
- (D) Sucralfate.**

(149) All of the following should be avoided in celiac disease except:

- (A) Wheat.**
- (B) Oats.**
- (C) Rice.**
- (D) Gluten.**

(150) A TB patient presented with painful red eyes and photophobia. What is the likely diagnosis?

- (A) Glaucoma.**
- (B) Uveitis.**
- (C) Bacterial conjunctivitis.**
- (D) Viral conjunctivitis.**

(151) Which of the following is correct regarding Barrett's esophagitis?

- (A) It carries an increased risk of adenocarcinoma.**
- (B) It carries an increased risk of squamous cell carcinoma.**
- (C) It carries no risk of malignancy.**
- (D) It is not related to gastroesophageal reflux disease.**

(152) A patient presented with bloody diarrhea. Stool analysis showed occult blood, colonoscopy showed friable mucosa and biopsy showed a crypt abscess. What is the likely diagnosis?

- (A) Crohn's disease.**
- (B) Ulcerative colitis.**
- (C) Diverticulosis.**
- (D) Fissure.**

(153) Which of the following is true about ulcerative colitis?

- (A) It carries an increased risk of malignancy.**
- (B) Fistula is a common complication.**
- (C) It spans the full thickness of the gastrointestinal wall.**
- (D) It features skip lesions.**

(154) A female patient presented with jaundice and pruritus. On examination, clubbing was observed. Investigation revealed elevated liver enzymes (alkaline phosphatase), high bilirubin levels, hyperlipidemia and positive antimitochondrial antibodies. What is the most likely diagnosis?

- (A) Primary sclerosing cholangitis.**
- (B) Primary biliary cirrhosis.**
- (C) Obstructive jaundice.**
- (D) Ascending cholangitis.**

(155) What is the empirical treatment of Helicobacter pylori peptic ulcers?

- (A) Omeprazole.**
- (B) Clindamycin.**
- (C) Metronidazole.**
- (D) Cimetidine.**

(156) What is the recommended treatment for Helicobacter pylori infection?

- (A) Omeprazole for 2 weeks and clarithromycin and amoxicillin for one week.**
- (B) Ranitidine, erythromycin and metronidazole for 2 weeks.**
- (C) A bismuth compound alone.**
- (D) Surgery.**

(157) Which of the following should be taken with NSAIDs analgesics to decrease the side effects of these drugs?

- (A) Cimetidine.**
- (B) Pseudoephedrine.**
- (C) Ceftriaxone.**
- (D) Doxycycline.**

(158) What is the organism responsible for pseudomembranous colitis?

- (A) Pseudomonas.**
- (B) Clostridium difficile.**
- (C) E. coli.**
- (D) Enterococcus faecalis.**

(159) A group of people presented with diarrhea and vomiting after eating a meal. What is the likely diagnosis?

- (A) Staphylococcus aureus poisoning.**
- (B) Salmonella poisoning.**
- (C) E. coli poisoning**
- (D) Clostridium difficile poisoning.**

(160) A patient presented with jaundice. He gave a history of received blood transfusion. What is the likely diagnosis?

- (A) Hepatitis A.**
- (B) Hepatitis C.**
- (C) Hepatitis D.**
- (D) Hepatitis E.**

(161) In which of the following is ibuprofen contraindicated?

- (A) Peptic ulcer.**
- (B) Seizures.**
- (C) Diabetes mellitus.**
- (D) Irritable bowel syndrome.**

(162) Which of the following features is related to Crohn's disease?

- (A) Fistula formation.**
- (B) Superficial layer involvement.**
- (C) Decreased risk of colon cancer.**
- (D) Continuous mucosal areas of ulceration that affect the anus.**

(163) A patient develops diarrhea at the end of a course of antibiotics. What is the likely cause?

- (A) Salmonella bacteria.**
- (B) Clostridium difficile.**
- (C) E. coli.**
- (D) Vibrio cholerae.**

(164) A patient presented with dysphagia to solids and liquids and regurgitation. Investigations; with barium uncovered non-peristalsis dilatation of the esophagus, air fluid level and tapering end. What is the diagnosis?

- (A) Esophageal spasm.**
- (B) Achalasia cardia.**
- (C) Esophageal cancer.**
- (D) Gastroesophageal reflux disease.**

(165) A patient who had recently travelled abroad presented with bloody diarrhea. Stool examination showed trophozoites with RBCs inclusion. What is the likely diagnosis?

- (A) Syphilis.**
- (B) Amoebic dysentery (entameba histolytica).**
- (C) E. coli.**
- (D) AIDS.**

(166) What is the recommended treatment for pseudomembranous colitis?

- (A) Metronidazole and vancomycin.**
- (B) Chloroquine.**
- (C) Clindamycin.**
- (D) Amoxicillin.**

(167) An elderly patient known to have atrial fibrillation presented with abdominal pain and bloody stools. What is the likely diagnosis?

- (A) Ischemic mesentery.**
- (B) Hemorrhoid.**
- (C) Ulcerative colitis.**
- (D) Crohn's disease.**

(168) A 40-year-old Crohn's disease patient presented with fevers, hip and back pain and brown stools containing blood. On examination, a soft abdomen, normal bowel sounds and a normal range of motion of the hips were observed. What is the best radiological diagnostic tool to proceed with for this patient?

- (A) Abdominal US.**
- (B) Abdominal CT.**
- (C) Hip US.**
- (D) Hip CT.**

(169) What are the two most useful tests for screening for hepatocellular carcinoma?

- (A) Liver biopsy and alpha-fetoprotein blood test.**
- (B) Liver US and alpha-fetoprotein blood test.**
- (C) Abdominal CT and alpha fetoprotein blood test.**
- (D) Liver biopsy and liver enzyme assay.**

(170) A teacher presented with malaise, fever and eye icterus. Two of his students had also developed the same condition. On examination he was found to have right upper abdominal tenderness. Which investigation should be used to confirm the diagnosis?

- (A) Positive for hepatitis A IgG.**
- (B) Positive hepatitis A IgM.**
- (C) Positive hepatitis B anti-body.**
- (D) Positive hepatitis B core.**

(171) Which of the following is correct about the symptoms of reflux esophagitis?

- (A) They are not affected by alkaline conditions.**
- (B) They increase with standing.**
- (C) They can be distinguished between it and duodenal ulcer.**
- (D) None of the above.**

(172) An obese elderly patient who is a smoker, presented with intermittent diarrhea and bleeding of the rectum. A stool guaiac test was positive. What is the diagnosis?

- (A) Iron deficiency anemia.**
- (B) Colorectal cancer.**
- (C) Hemorrhoid.**
- (D) Diverticulosis.**

(173) A patient presented with acute diarrhea. Investigation revealed epithelial infiltration with polymorphonuclear cells. Which organism is likely causing this diarrhea?

- (A) E. coli.**
- (B) Salmonella.**
- (C) Vibrio Cholerae.**
- (E) Shigella.**

(174) Which one of the following medications increases reflux esophagitis?

- (A) Theophylline.**
- (B) Ranitidine.**
- (C) Metoprolol.**
- (D) Ampicillin.**

(175) A patient presented with retrosternal chest pain. A barium swallow showed a corkscrew appearance. What is the most likely diagnosis?

- (A) Achalasia.**
- (B) Esophagitis.**
- (C) Gastroesophageal reflux disease.**
- (D) Diffuse esophageal spasm.**

(176) All of the following can cause gastric ulcers, except:

- (A) Tricyclic antidepressants.**
- (B) Delay gastric emptying.**
- (C) Sepsis.**
- (D) Salicylates.**

(177) The blood work of a patient with a history of illegal drug abuse showed the presence of an RNA virus. Which type of hepatitis is it likely that he has?

- (A) Hepatitis A.**
- (B) Hepatitis B.**
- (C) Hepatitis C.**
- (D) Hepatitis D.**

(178) Which of the following is ibuprofen contraindicated in?

- (A) Hypertension.**
- (B) Diabetes mellitus.**
- (C) Peptic ulcer.**
- (D) Dysmenorrhea.**

(179) What is the best prophylaxis for patient with a known case of sickle cell anemia?

- (A) Penicillin.**
- (B) Iron.**
- (C) Anticoagulants.**
- (D) Multivitamins.**

(180) Which of the following is associated with Polycythemia vera?

- (A) Muscle weakness.**
- (B) Splenomegaly.**
- (C) Venous engorgement.**
- (D) Hypertension.**

(181) A 35-year-old patient presented with symptoms of anemia (shortness of breath and fatigue) and chronic diarrhea. He had a surgery to resect part of the distal small intestine and proximal large intestine 4 years previously further surgery to anastomose them 6 months previously due to a blunt abdominal trauma caused by RTA. His CBC showed megaloblastic anemia. What is the most likely diagnosis?

- (A) Folic acid deficiency.**
- (B) Vitamin B12 deficiency.**
- (C) Anemia of chronic disease.**
- (D) Iron deficiency.**

(182) What is the most common complication of central nervous system in adult patients with sickle cell anemia?

- (A) Cerebral infarction.**
- (B) Ataxia.**
- (C) Seizure.**
- (D) Cerebral hemorrhage.**

(183) Which one of the following leukemias will characteristic with Blast cell?

- (A) Acute myeloid leukemia.**
- (B) Acute lymphoblastic leukemia.**
- (C) Chronic myeloid leukemia.**
- (D) Chronic lymphocytic leukemia.**

(184) A sickle cell anemia patient was admitted to hospital many times due to crisis attacks and now presents with pain of the abdominal, neck, arm and body. What is the recommended management plan for this patient?

- (A) Hospitalization and pain management as well as observation.**
- (B) Outpatient hydration management.**
- (C) Outpatient pain management and observation.**
- (D) Outpatient pain management.**

(185) Which one of the following is the most important prognostic factor in chronic myeloid leukemia?

- (A) Stage.**
- (B) Age.**
- (C) Lymphocytic doubling time.**
- (D) Degree of involvement of bone marrow.**

(186) An elderly patient is complaining of pruritus and weakness that started after taking a warm bath. Investigations revealed polycythemia. What is the mechanism of this pruritus?

- (A) Increased histamine sensitivity.**
- (B) Abnormal release of histamine.**
- (C) Decreased histamine sensitivity.**
- (D) Both A and B.**

(187) A female patient has typical signs of DVT. Which one of the following will exacerbate her condition?

- (A) DIC.**
- (B) Hemophilia A.**
- (C) Hemophilia B (Christmas disease)**
- (D) Anticoagulant agent.**

(188) A 65-year-old patient presented with hepatosplenomegaly and lymphadenopathy. Bone marrow biopsy confirmed a diagnosis of chronic lymphocytic leukemia. The patient gave a history of breast cancer 5 years ago and was treated with chemotherapy. The patient is also a smoker. What is the greatest risk factor for the development of chronic lymphocytic leukemia?

- (A) History of radiation.**
- (B) Smoking.**
- (C) Previous cancer.**
- (D) Age.**

(189) A patient presented with DVT and inferior venous obstruction. What is a possible diagnosis for this patient?

- (A) Christmas disease.
- (B) Lung cancer.
- (C) Nephrotic syndrome.
- (D) Systemic lupus erythematosus.

(190) What would you expect to find in a patient with anemia of chronic disease?

- (A) Increased serum iron and increased TIBC.
- (B) Decreased serum iron and increased TIBC.
- (C) Decreased serum iron and decreased TIBC.
- (D) Increased serum iron and decreased TIBC.

(191) A patient presented with symptoms of anemia. Investigations revealed a low MCV, decreased serum iron and increased TIBC. What is the diagnosis?

- (A) Iron deficiency anemia.
- (B) Pernicious anemia.
- (C) Anemia of chronic disease.
- (D) Hemolytic anemia.

(192) How can a diagnosis of anemia be confirmed in a patient with a family history of thalassemia?

- (A) Hemoglobin electrophoresis.
- (B) Genetic testing.
- (C) Histopathological analysis.
- (D) Blood smear.

(193) What is the recommended treatment for Von Willebrand disease?

- (A) Fresh frozen plasma.
- (B) Factor Vm replacement.
- (C) Blood transfusion.
- (D) Oral iron.

(194) Which one of the following diseases is commonly treated with fresh frozen plasma?

- (A) Hemophilia A.
- (B) Hemophilia B.
- (C) Von Willebrand disease.
- (D) DIC.

(195) What is the defect in hemophilia?

- (A) Clotting factors.
- (B) Platelet dysfunction.
- (C) Blood vessels dysfunction.
- (D) All of the above.

(196) Laboratory results from the blood of a leukemia patient show pancytopenia, leukocytosis and positive myeloperoxidase. Which type of leukemia does he have?

- (A) Acute myeloid leukemia.
- (B) Acute lymphoblastic leukemia.
- (C) Chronic myeloid leukemia.
- (D) Chronic lymphocytic leukemia.

(197) A patient presented with a painless neck mass and a 5 weeks history of fatigue, generalized pruritus and mild cough. Which one of the following is the most likely diagnosis?

- (A) Hodgkin's lymphoma.
- (B) Non-Hodgkin's lymphoma.
- (C) Lyme disease.
- (D) Infectious mononucleosis.

(198) A young female presented with a 6 months history of night sweats and weight loss. On examination splenomegaly was uncovered. Investigation showed reed Sternberg cells in the blood. What is the diagnosis?

- (A) Hodgkin's lymphoma.
- (B) Lyme disease.
- (C) Infectious mononucleosis.
- (D) Non-Hodgkin's lymphoma.

(199) A patient presented with a sore red tongue. Investigations showed low vitamin B12 levels in his blood. What is the diagnosis?

- (A) Pernicious anemia.
- (B) Hemolytic anemia.
- (C) Anemia of chronic disease.
- (D) Iron deficiency anemia.

(200) What is true about pneumococcal vaccination in sickle cell disease patients of 11-month-old?

- (A) 23-valent should be taken.
- (B) 32-valent should be taken.
- (C) The patient requires a prophylactic antibiotic even if they have been vaccinated.
- (D) There is no need for antibiotics if the patient has been vaccinated.

(201) A child with leukemia suffered from septicemia caused by a venous line. What is the most likely organism to have caused this septicemia?

- (A) **E. coli.**
- (B) Gram-negative streptococci.
- (C) Gram-positive streptococci.
- (D) Pseudomonas.

(202) All of the following are recommended for the primary prevention of iron deficiency anemia except:

- (A) Health education about food rich in iron.**
- (B) Iron-fortified food in childhood.**
- (C) Limitation of cow milk before 12-month-old.**
- (D) Genetic screening for hereditary anemia.**

(203) An adult patient with sickle cell anemia suffered from an upper respiratory tract infection then suddenly developed chest pain, fever and tachypnea. On examination RR = 30/min. His oxygen saturation was 90% and he had lobar infiltration, observed by chest x-ray. His WBCs count was 18,000/md and hemoglobin was 7 gm/dl. What is the likely cause of his condition?

- (A) Pulmonary edema.**
- (B) Pulmonary hypertension.**
- (C) Acute chest syndrome.**
- (D) Vaso-occlusive crisis.**

(204) A child who eats little meat presented with pallor. He was found to have microcytic hypochromic anemia. What is the recommended treatment for him?

- (A) Trial of iron therapy.**
- (B) Multivitamin with iron daily.**
- (C) Folic acid.**
- (D) Multivitamins.**

(205) For what duration should anticoagulant agents be prescribed?

- (A) 1 month.**
- (B) 6 months.**
- (C) 6 weeks.**
- (D) 1 year.**

(206) A sickle cell anemia patient presented with asymptomatic unilateral hip pain. What is the most likely diagnosis?

- (A) Septic arthritis.**
- (B) Avascular necrosis.**
- (C) Aseptic arthritis.**
- (D) Gout disease.**

(207) What is the therapeutic range of the INR for warfarin?

- (A) 1.5 - 2.5**
- (B) 2.0 - 3.0**
- (C) 2.5 - 3.5**
- (D) 3.0 - 4.0**

(208) A case of Hodgkin's lymphoma (mediastinal mass) treated with radiotherapy, but not on regular follow up, presented with gradual painless difficulty in swallowing and shortness of breath. On examination, facial swelling and redness was found. What is the diagnosis?

- (A) Superior vena cava obstruction.
- (B) Inferior vena cava obstruction.
- (C) Thoracic aortic aneurysm.
- (D) Abdominal aortic aneurysm.

(209) What is the investigation of choice in iron deficiency anemia?

- (A) Serum iron.
- (B) Ferritin.
- (C) TIBC.
- (D) MCV.

(210) A 65-year-old man had a hemoglobin level of 9 gm/dl. What is the next step in his treatment?

- (A) Assess his iron levels.
- (B) Assess his lactate dehydrogenase levels.
- (C) Arrange for an endoscopy.
- (D) Electrophoresis.

(211) A patient presented with a knee swelling with bloody content due to trauma to the knee. What is the probable mechanism of this bleeding?

- (A) Platelet deficiency.
- (B) Clotting factor deficiency.
- (C) Platelet dysfunction.
- (D) Blood vessels dysfunction.

(212) A 56-year-old patient presented with symptoms of anemia. His CBC showed a hemoglobin level of 11 gm/dl, MCV of 93 fl and a reticulocyte count of 0.25%. What is the likely cause of this anemia?

- (A) Chronic renal failure.
- (B) Liver disease.
- (C) Sickle cell anemia.
- (D) G6PD deficiency.

(213) A male patient presented with excessive fluid intake and polyuria. His FBS level was 122 mg/dl. What is the likely diagnosis?

- (A) Diabetes mellitus.
- (B) Diabetes insipidus.
- (C) Impaired FBS.
- (D) Normal.

(214) A diabetic patient presented with abdominal pain, vomiting and the smell of ketones from his mouth. What is the most frequent pathophysiology of these symptoms?

- (A) Insulin overdose.**
- (B) Insulin missed.**
- (C) Oral drugs overdose.**
- (D) Oral drugs missed.**

(215) A diabetes mellitus type 1 patient, presented with Kussmaul breathing and an acetone smell. What is the pathophysiology of the acetone smell?

- (A) Insulin deficiency which leads to fatty acid utilization and the production of ketones.**
- (B) Missed hypoglycemic medications which lead to protein utilization and the production of ketones.**
- (C) Both A and B.**
- (D) None of the above.**

(216) A patient newly diagnosed with diabetes mellitus type 1 has a normal vision. How often should he be checked for any complications or changes in his eyes?

- (A) Now and then annually.**
- (B) Now and after 3 years.**
- (C) Now and after 3 years.**
- (D) If there is a complaint.**

(217) A 15-year-old boy presented with unilateral gynecomastia. What is the recommended management plan for this patient?

- (A) His condition may resolve spontaneously so no management is necessary.**
- (B) Hormonal therapy.**
- (C) Decreased use of soda oil or fish oil.**
- (D) Immediate surgical removal.**

(218) Which of the following is true regarding metformin?

- (A) The main complication is hypoglycemia.**
- (B) Its use can lead to weight gain.**
- (C) It suppresses hepatic gluconeogenesis.**
- (D) It stimulates hepatic gluconeogenesis.**

(219) A 49-year-old man who smokes 2 packs of cigarettes per day presents with weight gain. A chest x-ray shows a lung mass and laboratory tests reveal hyponatremia with hyperosmolar urine. What is the most likely diagnosis?

- (A) Inappropriate secretion of antidiuretic hormone.**
- (B) Pituitary failure.**
- (C) Renal failure.**
- (D) Conn's syndrome.**

(220) A diabetes mellitus patient presented to the ER with drowsiness. The patient's blood sugar level was 400 mg/dl and pH was 7.05. What is the recommended management for this patient?

- (A) 10 units of insulin and 400 ml of dextrose.**
- (B) 0.1 unit/kg of insulin administered SC.**
- (C) NaHCO₃.**
- (D) Give one liter of normal saline solution.**

(221) An elderly patient with diabetes mellitus type 2 presented to the ER with sweating and dizziness. The patient's blood sugar level was 60 mg/dl. Which drug is likely to be causing these manifestations?

- (A) Thiazolidinediones.**
- (B) Sulfonylurea drugs.**
- (C) Insulin.**
- (D) Alpha-glucosidase inhibitors.**

(222) Which hormone causes large hands and jaws, obesity and a large body?

- (A) Thyroid hormone.**
- (B) Adrenocorticotrophic hormone.**
- (C) Human growth hormone.**
- (D) Anti-diuretic hormone.**

(223) A diabetic patient presented with exudates from a wound in his leg with poor healing and no sign of inflammation. What is the cause of the poor wound healing in this diabetes mellitus patient?

- (A) Decreased phagocytosis process.**
- (B) Stimulated bacterial growth.**
- (C) Decreased immunity.**
- (D) Increased blood supply to the wound.**

(224) A patient was diagnosed with osteopenia. Investigations revealed increased serum alkaline phosphatase and normal serum calcium, phosphate and vitamin D levels. What is the recommended treatment for this patient?

- (A) Selective estrogen receptor modulators.**
- (B) Calcium regulator.**
- (C) Bisphosphonates.**
- (D) Multivitamins.**

(225) What is the pathophysiology of diabetic ketoacidosis?

- (A) Missing insulin leads to the release of free fatty acids and the formation of ketone bodies.**
- (B) Increased insulin resistance.**
- (C) Decreased hepatic gluconeogenesis.**
- (D) Both B and C.**

(226) An elderly patient with diabetes mellitus and no previous significant medical problem was found to have repeated blood pressure measurements in of 138/85mmHg. What is the first line of management for this abnormality?

- (A) Diuretics.**
- (B) Angiotensin converting enzyme inhibitors.**
- (C) Lifestyle and behavioral therapy.**
- (D) Nothing.**

(227) What is the mechanism of action of propylthiouracil?

- (A) Inhibits the action of thyroid peroxidase (thyroperoxidase).**
- (B) Inhibits the action of the sodium-dependent iodide transporter.**
- (C) Decreases the efficacy of TSH binding to the TSH receptors.**
- (D) Decreases the rate of proteolysis by thyroglobulin.**

(228) What is the recommended treatment for asymptomatic hyperthyroidism in pregnancy?

- (A) Beta-blockers.**
- (B) Propylthiouracil.**
- (C) Methimazole.**
- (D) Nothing.**

(229) An 18-year-old boy presented to the ER with abdominal pain, vomiting and leg cramp. His RBS was 414 mg/dl. What is the most important next step of the investigation into his condition?

- (A) Abdominal US.**
- (B) ABG.**
- (C) Urine analysis by dipstick.**
- (D) Chest x- ray.**

(230) What is the recommended treatment for albuminuriain diabetes mellitus patients?

- (A) Angiotensin converting enzyme inhibitors.**
- (B) Diuretics.**
- (C) Calcium channel blockers.**
- (D) Hemodialysis.**

(231) A patient was found to have the following blood test results: high parathyroid hormone, low calcium, high creatinine and normal vitamin D levels. What is the likely diagnosis?

- (A) Vitamin D deficiency.**
- (B) Chronic renal failure.**
- (C) Iron deficiency anemia.**
- (D) Polycystic kidney disease.**

(232) A 40-year-old male presented to the clinic complaining of central obesity, acne, weakness and buffalo hump. He is not known to have any medical illness. On examination, he was found to have hypertension. What is the likely diagnosis?

- (A) Cushing's disease.**
- (B) Psuedo-cushing syndrome induced by alcohol intake.**
- (C) Adrenal adenoma.**
- (D) Adrenal carcinoma.**

(233) A diabetic patient presented with diabetic ketoacidosis, hypokalemia, hypotension. What is the best initial treatment for this patient?

- (A) Give 2 liters normal saline with insulin infusion at a rate of 0.1/kg.**
- (B) Give 2 liters normal saline with KCl at 20 mEq.**
- (C) Dextrose with insulin.**
- (D) NaHCO₃.**

(234) What is human leukocyte antigen (HLA) type of diabetes mellitus type 1?

- (A) DR3.**
- (B) DR4.**
- (C) DR5.**
- (D) Both A and B.**

(235) Which of the following diseases most occurs due to Candida infection?

- (A) Diabetes mellitus.**
- (B) Systemic lupus erythematosus.**
- (C) Gastroenteritis.**
- (D) Endocarditis.**

(236) A comatose patient was brought to the ER by his family. He did not respond to painful stimuli. He had high TSH levels, severe hypothyroidism and hyponatremia (Na = 108). What is the recommended management?

- (A) Intubate, give 3% sodium, hydrocortisone and treat the hypothyroidism.**
- (B) Intubate, give 3% sodium then treat the hypothyroidism.**
- (C) Treat the hypothyroidism and monitor serum sodium level every 6 hours.**
- (D) Give thyroid and fluid replacements only.**

(237) What is the most common cause of renal failure?

- (A) Diabetes mellitus.**
- (B) Nephritis.**
- (C) Smoking.**
- (D) Hyperlipidemia.**

(238) What are the factors most related to retinopathy in diabetic patients?

- (A) Hypertension and obesity.**
- (B) Hypertension and smoking.**
- (C) Smoking and obesity.**
- (D) Smoking.**

(239) A 24-year-old female with newly diagnosed diabetes mellitus type 2 has been wearing glasses for 10 years. What is the recommended follow up period for the ophthalmic clinic?

- (A) 6 Months.**
- (B) 12 Months.**
- (C) 5 years.**
- (D) 10 years.**

(240) The thyroid function test of a pregnant woman was completely normal, with the exception of high TSH levels. What is the diagnosis?

- (A) Normal due to pregnancy.**
- (B) Pituitary disorder.**
- (C) Thyroid disorder.**
- (D) Adrenal disorder.**

(241) What is the recommended treatment for thyroid carcinoma?

- (A) Surgical resection.**
- (B) Radiotherapy.**
- (C) Anti-thyroid drug.**
- (D) Chemotherapy.**

(242) What is the diagnosis of a patient with the following blood test results: high Na, low K and high HCO₃?

- (A) Primary hyperaldosteronism.**
- (B) Secondary hyperaldosteronism.**
- (C) Addison disease.**
- (D) Pheochromocytoma.**

(243) A 22-year-old patient has been newly diagnosed with diabetes mellitus type 1. What is the recommended follow up period for the ophthalmic clinic?

- (A) Upon diagnosis, then annually.**
- (B) After 3 years, then annually.**
- (C) After 5 years, then annually.**
- (D) After 10 years, then annually.**

(244) A 35-year-old lady presented to the clinic with swelling in the neck. The swelling is firm, large and lobulated. The patient also complains of psychosis, weight gain, depression, sensitivity to heat and cold, fatigue, bradycardia, constipation, migraines, muscle weakness, muscle cramps and hair loss. Blood tests revealed increased TSH and decreased T₄ levels. What is the likely diagnosis?

- (A) Addison disease.**
- (B) Hashimoto's thyroiditis.**
- (C) Idiopathic hypoparathyroidism.**
- (D) Hypopituitarism.**

(245) All of the following can cause hypokalemia, except:

- (A) Acute tubular necrosis.**
- (B) Metabolic acidosis.**
- (C) Chronic diarrhea.**
- (D) Addison disease.**

(246) Which one of the following is not normally palpable in a head and neck examination?

- (A) Thyroid gland.**
- (B) Submandibular gland.**
- (C) Parotid gland.**
- (D) Lymphnodes.**

(247) What is the pathophysiology of Cushing's syndrome?

- (A) Increased adrenocorticotrophic hormone from a pituitary adenoma.**
- (B) Decreased adrenocorticotrophic hormone from a pituitary adenoma.**
- (C) Increased adrenocorticotrophic hormone from the adrenal gland.**
- (D) Decreased adrenocorticotrophic hormone from the adrenal gland.**

(248) A newly diagnosed child with diabetes mellitus, found in his home unconscious. What is the advice for his family first thing to do?

- (A) Bring him as soon as possible to the ER or call an ambulance.**
- (B) Give him sugar in fluid orally.**
- (C) Give him his usual dose of insulin.**
- (D) Give him IM glucagon.**

(249) What is the target glycosylated haemoglobin (HbA1c) level in a diabetic patient?

- (A) 2-3%.**
- (B) 4-5%.**
- (C) 6-7%.**
- (D) 8-9%.**

(250) What is the goal of blood pressure in patients with hypertension and diabetes mellitus?

- (A) SBP less than 140 mmHg and DBP less than 90 mmHg.**
- (B) SBP less than 130 mmHg and DBP less than 90 mmHg.**
- (C) SBP less than 130 mmHg and DBP less than 80 mmHg.**
- (D) SBP less than 120 mmHg and DBP less than 80 mmHg.**

(251) A 40-year-old male presented to the clinic with large hands. On examination, he was also found to have hepatomegaly. Which of the following is the most likely diagnosis?

- (A) Acromegaly.**
- (B) Gigantism.**
- (C) Hyperthyroidism.**
- (D) Hypothyroidism.**

(252) What is the best non-pharmacological method of lowering hypertension?

- (A) Cessation of smoking.**
- (B) Decrease lipid level.**
- (C) Reduce weight.**
- (D) High sodium diet.**

(253) What is the most active form of thyroid hormone?

- (A) T3.**
- (B) T4.**
- (C) TSH.**
- (D) TRH.**

(254) A pregnant lady presented with neck swelling and multiple nodular non-tender goiter. What is the best approach to manage this condition?

- (A) Thyroid biopsy.**
- (B) Anti-thyroid medication.**
- (C) Radioactive iodine therapy.**
- (D) Evaluation of TSH and free T4 and follow up.**

(255) Which of the following is associated with primary hyperaldosteronism?

- (A) Hypernatremia.**
- (B) Hypomagnesemia.**
- (C) Hypokalemia.**
- (D) Hyperkalemia.**

(256) What is the recommended initial treatment of symptomatic hyperthyroidism?

- (A) Surgery.**
- (B) Radioactive iodine therapy.**
- (C) Beta-blockers and propylthiouracil.**
- (D) Rituximab.**

(257) A patient with a known case of diabetes mellitus presented with a spastic tongue, dysarthria and spontaneous crying. What is the most likely diagnosis?

- (A) Parkinson's disease.**
- (B) Bulbar palsy.**
- (C) Pseudobulbar palsy.**
- (D) Myasthenia gravis.**

(258) A 59-year-old patient presented with new onset supraventricular tachycardia with palpitation and had no history of shortness of breath or chest pain. On examination his chest was normal with no peripheral edema. Investigation showed his oxygen saturation in room air as 98%. What is the next investigation that should be performed?

- (A) ECG stress test.**
- (B) Pulmonary arteriography.**
- (C) CT scan.**
- (D) TSH.**

(259) A patient presented with a history of neck discomfort, palpitation and sweating. On examination he had a tender neck. Blood investigations revealed low TSH and high T4 levels. What is the likely diagnosis?

- (A) Hyperthyroidism.**
- (B) Subacute thyroiditis.**
- (C) Hemangioma.**
- (D) Lipoma.**

(260) What is the best single test to confirm Cushing's syndrome?

- (A) Plasma cortisone level.**
- (B) Adrenocorticotrophic hormone.**
- (C) Dexamethasone suppression test.**
- (D) Renal function test.**

(261) A 50-year-old patient with uncontrolled diabetes mellitus presented with brown to black nasal discharge. What is the most likely diagnosis?

- (A) Mucormycosis.**
- (B) Aspergillosis.**
- (C) Foreign body.**
- (D) Epistaxis.**

(262) A 25-year-old woman presented with weight loss, heat intolerance and irritability. What is the likely diagnosis?

- (A) Hyperthyroidism.**
- (B) Hypothyroidism.**
- (C) Hyperparathyroidism.**
- (D) Hypoparathyroidism.**

(263) A young male with diabetes mellitus presented with abdominal pain, vomiting and the smell of ketones from his mouth. What is the frequent cause of these symptoms?

- (A) Insulin mismanagement.**
- (B) Diet mismanagement.**
- (C) Renal failure.**
- (D) All of the above.**

(264) Which of these is the earliest sign of puberty in males?

- (A) The appearance of pubic hair.**
- (B) Increase in testicular size.**
- (C) Increase in penis size.**
- (D) Increase in prostate size.**

(265) A female patient with diabetes mellitus type 1 is advised to make schedule for glucose level for monitoring his insulin dose; FBS = 283 mg/dl, after lunch = 95 mg/dl and at 3 pm = 184 mg/dl. What is the modification of insulin dose?

- (A) Increase in short acting insulin dose.
- (B) Decrease in short acting insulin dose.
- (C) Increase in long acting insulin dose.
- (D) Decrease in long acting insulin dose.

(266) A young female patient complaining of severe headaches over a long period is starting to avoid alcohol and smoking to improve her health. She notes that she had improved over her last pregnancy. Which treatment has she used?

- (A) Biofeedback.
- (B) Beta-blockers.
- (C) Alcohol cessation.
- (D) Tobacco withdrawal.

(267) What is the most effective treatment of cluster headaches?

- (A) Ergotamine nebulizer.
- (B) Sumatriptan SC.
- (C) 100% oxygen.
- (D) Verapamil IV.

(268) Which one of the following will increase IgG levels in CSF?

- (A) Multiple sclerosis.
- (B) Duchenne dystrophy.
- (C) Down syndrome.
- (D) Epilepsy.

(269) What is the first sign of increase intracranial pressure?

- (A) Nausea.
- (B) Vomiting.
- (D) Bilateral pupil constrict.
- (E) Decreased level of consciousness.

(270) A patient presented to the hospital 6 hours after a cerebral ischemic stroke. What is the best treatment?

- (A) Aspirin.
- (B) Tissue plasminogen activator.
- (C) Clopidogrel.
- (D) Heparin IV.

(271) A patient presented with neck stiffness, high fever, headache and petechial rash. Lumbar puncture showed a high CSF pressure and CSF analysis showed a decrease in glucose level. What would be the cause?

- (A) Neisseria meningitides.**
- (B) Neisseria gonorrhea.**
- (C) Haemophilus influenza.**
- (D) Streptococcus pneumonia.**

(272) A male patient presented with pain near the right eye preceded by tingling and numbness. The pain occurs many times a week in the same side. The patient also complains of nasal congestion and eyelid edema. What is the diagnosis?

- (A) Cluster headache.**
- (B) Migraine with aura.**
- (C) Tension headache.**
- (D) Withdrawal headache.**

(273) A 19-year-old patient had a closed head injury and now presents with an inability to bring a spoon in front of his mouth to eat. Where is the most likely site of lesion?

- (A) Temporal lobe.**
- (B) Occipital lobe.**
- (C) Parietal lobe.**
- (D) Cerebellum.**

(274) A female patient presented with a band-like headache which occurred twice/week and increased in intensity with stress. What is the likely diagnosis?

- (A) Cluster headache.**
- (B) Migraine.**
- (C) Tension headache.**
- (D) Withdrawal headache.**

(275) Which one of the following is closely associated with Guillain-Barre syndrome?

- (A) Descending paralysis starting from the upper limbs.**
- (B) Ascending paralysis starting from the lower limbs.**
- (C) Normal CSF.**
- (D) Need ECG to confirm the diagnosis.**

(276) What is the initial ER management of grand mal seizure?

- (A) ABC of CPR to secure airway.**
- (B) Physical splint or protection.**
- (C) Anticonvulsants.**
- (D) ECG monitoring.**

(277) An elderly male patient admitted to the hospital due to cerebrovascular accident lost the vision in his left eye 9 days later. Where is the site of lesion?

- (A) Frontal lobe.**
- (B) Occipital lobe.**
- (C) Parietal lobe.**
- (D) Temporal lobe.**

(278) What is the common CSF finding in the initial 24 hours of aseptic meningitis?

- (A) Decreased protein level.**
- (B) Increased glucose level.**
- (C) Lymphocytosis.**
- (D) Eosinophil polyneuropathy.**

(279) What is most important sign of pure autonomic failure?

- (A) Orthostatic hypotension.**
- (B) Sinus arrhythmia.**
- (C) Horner syndrome.**
- (D) Muscle wasting.**

(280) A young male patient who works out doors in hot weather presents with clammy cold skin. On examination he has hypotension and tachycardia. What is the diagnosis?

- (A) Heat stroke.**
- (B) Heat exhaustion.**
- (C) Fever.**
- (D) Volume shock.**

(281) A 17-year-old female patient complained of unilateral headache, nausea and vomiting. The pain was exacerbated by movement and aggravated by light. What is the most likely diagnosis?

- (A) Migraine.**
- (B) Cluster headache.**
- (C) Tension headache.**
- (D) Withdrawal headache.**

(282) What are the symptoms of L4/L5 disc prolapse?

- (A) Loss of ankle jerk reflex.**
- (B) Fasciculation of posterior calf muscles.**
- (C) Loss of dorsiflexion compartment of the foot (foot drop).**
- (D) Loss of the sensation in the groin and anterior aspect of the thigh.**

(283) A patient presented to the ER with a deep laceration in the anterior aspect of the wrist. What is the result of this injury?

- (A) Radial nerve injury and wrist drop.**
- (C) Ulnar nerve injury and claw hand.**
- (D) Median nerve injury and loss of thumb opposition.**
- (B) Sensory loss only.**

(284) What is the normal site of lumbar puncture?

- (A) Between L1-L2.**
- (B) Between L2-L3.**
- (C) Between L3-L4.**
- (D) Between L4-L5.**

(285) What is the most common reversible risk factor of stroke?

- (A) Diabetes mellitus.**
- (B) Elevated blood pressure.**
- (C) Family history of stroke.**
- (D) Hyperlipidemia.**

(286) Which of the following is false about emergency management of stroke?

- (A) Giving IV fluid and avoid glucose containing (dextrose).**
- (B) Diazepam should be given for convulsions.**
- (C) Anticonvulsant drugs are not needed if the patient has seizures.**
- (D) Managing elevated blood pressure.**

(287) Romberg's sign indicates a lesion in the:

- (A) Dorsal column.**
- (B) Cerebellum.**
- (C) Visual cortex.**
- (D) Brain stem.**

(288) An elderly male patient presented with difficulty in walking, resting tremors, sleep disturbance and rigidity. What is the most common symptom of the disease suffered by this patient?

- (A) Rigidity.**
- (B) Tremors.**
- (C) Unsteady gait.**
- (D) Hypotension.**

(289) Which of the following antiepileptic drugs has a side effect of alopecia?

- (A) Phenytoin.**
- (B) Carbamazepine.**
- (C) Sodium valproate.**
- (D) Diazepam.**

(290) A 33-year-old male patient presented with pain in his lip and right cheek. The pain was stabbing and triggered with touch. On examination, his cranial nerves were intact. What is the recommended treatment for this patient?

- (A) Carbamazepine.**
- (B) Phenobarbital.**
- (C) Ergotamine.**
- (D) Lithium.**

(291) All of the following are extrapyramidal lesion symptoms except:

- (A) Dyskinesia.**
- (B) Akathisia.**
- (C) Dystonia.**
- (D) Tonic-clonic convulsion.**

(292) What is the most common cause of intra-cerebral hemorrhage?

- (A) Ruptured aneurysm.**
- (B) Hypertension.**
- (C) Trauma.**
- (D) Vascular malformation.**

(293) What is the most common cause of non-traumatic subarachnoid hemorrhage?

- (A) Middle meningeal artery hemorrhage.**
- (B) Bridging vein hemorrhage.**
- (C) Rupture of a cerebral aneurysm.**
- (D) Non-aneurysmal perimesencephalic hemorrhage.**

(294) A female patient presented with dysuria, urination urgency, increase urination frequency and suprapubic pain. She is allergic to sulfa and penicillin. What is the treatment?

- (A) Nitrofurantoin.**
- (B) Cephalexin.**
- (C) Trimethoprim-sulfamethoxazole.**
- (D) Amoxicillin.**

(295) A female patient complaining of urinary symptoms that have persisted for one year took several different antibiotics with no improvement. On examination there was a mild tenderness on the base of the bladder and CT and MRI scans were normal. What is the diagnosis for this patient?

- (A) Interstitial cystitis.**
- (B) Diabetes mellitus.**
- (C) Candida albican.**
- (D) Urethral injury.**

(296) What is the gold standard test of renal function?

- (A) Creatinine clearance.**
- (B) 24 hours urine collection.**
- (C) BUN to creatinine ratio.**
- (D) BUN serum level.**

(297) What is the most reliable laboratory test to establish a diagnosis of acute glomerulonephritis?

- (A) RBCs cast in urine.**
- (B) Increased WBCs in urine.**
- (C) Low hemoglobin with normal RBCs.**
- (D) Small shrunk kidney identified by US.**

(298) A patient presented with abdominal pain and hematuria. On examination hypertension and palpable bilateral flank masses were observed. Genetic testing showed an abnormality in chromosome 16. What is the diagnosis?

- (A) Amyloidosis.
- (B) Sarcoidosis.
- (C) Polycystic kidney disease.
- (D) Metastatic hypernephroma.

(299) Which of the following is found in chickpeas, kidney beans and lentils?

- (A) Bromide.
- (B) Chromium.
- (C) Iron.
- (D) Selenium.

(300) Which one of the following is associated with Goodpasture's syndrome?

- (A) Osteoporosis.
- (B) Multiple fractures and nephrolithiasis.
- (C) Lung hemorrhage and glomerulonephritis.
- (D) Lung hemorrhage only.

(301) A 60-year-old female patient with a known case of hypertension presents to the hospital with edema. She has azotemia and a glomerular filtration rate of 44 ml/min. What is the cause of this kidney disease?

- (A) Bilateral renal artery stenosis.
- (B) Diabetic nephropathy.
- (C) Renal tubular acidosis.
- (D) None of the above.

(302) What is the mechanism of rheumatic fever development from group A streptococcus infection?

- (A) Blood dissemination.
- (B) The development of pharyngitis/tonsillitis.
- (C) Joint invasion.
- (D) All of the above.

(303) Which of the following is a minor criterion for the diagnosis of rheumatic fever?

- (A) Arthritis.
- (B) Erythema marginatum.
- (C) Chorea.
- (D) Fever.

(304) Which drug is used to treat Leishmania?

- (A) Amphotericin B.
- (B) Metronidazole.
- (C) Doxycycline.
- (D) Penicillin.

(305) Which of the following is a treatment for giardiasis?

- (A) Praziquantel.**
- (B) Mebendazole.**
- (C) Metronidazole.**
- (D) Albendazole.**

(306) A patient presented with neck swelling. On examination the patient had cervical lymphadenopathy with hepatosplenomegaly. He had evidence of Epstein Barrvirus antibodies. What is the diagnosis?

- (A) Infectious mononucleosis.**
- (B) Toxoplasmosis.**
- (C) Malaria.**
- (D) Lymphoma.**

(307) A HIV patient presented with a hemorrhagic lesion in the mouth and papules in the face. Skin biopsy showed spindle cells and vascular structures. What is the diagnosis?

- (A) Kaposi sarcoma.**
- (B) Melanoma.**
- (C) Squamous cell carcinoma.**
- (D) Basal cell carcinoma.**

(308) Which of the following is the most common cause of malaria?

- (A) Plasmodium falciparum.**
- (B) Plasmodium vivax.**
- (C) Plasmodium ovale.**
- (D) Plasmodium malariae.**

(309) What is the most specific test for syphilis?

- (A) Blood culture and sensitivity.**
- (B) CBC.**
- (C) Fluorescent treponemal antibody absorption.**
- (D) Microhemagglutination assay for antibodies to Treponema.**

(310) What is the recommended chemoprophylaxis for vibrio cholera?

- (A) Penicillin V.**
- (B) Gentamicin.**
- (C) Tetracycline.**
- (D) Amoxicillin.**

(311) Which of the following is true about aspirin overdose?

- (A) Liver enzyme levels will peak within 3-4 hours.**
- (B) First signs include peripheral neuropathy and loss of reflexes.**
- (C) 150 mg/kg of aspirin will not result in aspirin toxicity.**
- (D) There is no effect on acid base status.**

(312) Which of the following is the most cost-effective drug to prescribe DVT patients?

- (A) Low molecular weight heparin.**
- (B) Unfractionated heparin.**
- (C) Warfarin.**
- (D) Aspirin.**

(313) What is the recommended treatment for anaphylaxis?

- (A) Epinephrine.**
- (B) Antihistamine.**
- (C) Corticosteroid.**
- (D) Analgesic.**

(314) What is the antidote for organophosphorus?

- (A) Atropine.**
- (B) Deferoxamine.**
- (C) Ethanol.**
- (D) Vitamin K.**

(315) What is the result of vitamin B1 (thiamine) deficiency?

- (A) Beriberi.**
- (B) Pernicious anemia.**
- (C) Scurvy.**
- (D) Pellagra.**

(316) A patient was diagnosed with infectious mononucleosis which confirmed by monospot test. The patient had a palpable tip of the spleen. What is the recommended management for this patient?

- (A) Empiric antibiotics.**
- (B) Antivirals.**
- (C) Observation.**
- (D) Supportive treatment.**

(317) An elderly patient presented with fever. A blood culture showed the presence of enterococcus faecalis. What is the probable source of these bacteria?

- (A) Skin.**
- (B) Urinary tract.**
- (C) Upper respiratory tract.**
- (D) Mouth.**

(318) How can factitious fever be confirmed?

- (A) CBC.**
- (B) Blood pressure.**
- (C) Chest x-ray.**
- (D) Heart rate.**

(319) What is the recommended treatment for peritonitis?

- (A) Clindamycin.**
- (B) Metronidazole.**
- (C) Amoxicillin.**
- (D) Doxycycline.**

(320) A patient presented with leg pain which was aggravated by walking and relieved by rest. On examination hair loss and coldness in the leg was observed. What is the diagnosis?

- (A) Chronic leg ischemia.**
- (B) DVT.**
- (C) Venous insufficiency.**
- (D) Cellulitis.**

(321) A hypertensive patient using lisinopril presented to the ER with a cough due to an antihypertensive drug. Which drug will give the same antihypertensive effect but with less risk of a cough?

- (A) Losartan.**
- (B) Captopril.**
- (C) Enalapril.**
- (D) Benazepril.**

(322) A patient presented to the hospital with a history of right back pain for one day which was not relieved by analgesics. He noticed a skin rash forming a tight chain like pattern from the back to the abdomen. What is the likely diagnosis?

- (A) Herpes zoster virus infection.**
- (B) Measles.**
- (C) Epstein Barr virus infection.**
- (D) Allergy to drug.**

(323) Which one of the following drugs combinations should be avoided?

- (A) Digoxin and levodopa.**
- (B) Tetracycline and aluminum hydroxide.**
- (C) Penicillin and probenecid.**
- (D) Cephaloridine and acetaminophen.**

(324) What is the best method of eradicating entameba histolytica?

- (A) Boiling of water.**
- (B) Freezing.**
- (C) Iodine treatment.**
- (D) Add chlorine to water.**

(325) What is the best investigation for the diagnosis of giant cell arteritis?

- (A) Biopsy from temporal arteritis.**
- (B) Raised ESR.**
- (C) CBC.**
- (D) Angiogram.**

(326) Which of the following drugs is taken twice a day?

- (A) Ibu profen.**
- (B) Piroxicam.**
- (C) Indomethacin.**
- (D) Naproxen.**

(327) What is the most effective method to prevent brucellosis infection?

- (A) Treat infected people.**
- (B) Immunize farmers and those whom deal with the animals.**
- (C) Dispose of all the infected animals.**
- (D) Pasturization of dairy products.**

(328) What is the recommended treatment of Neisseria gonorrhoeae?

- (A) Ceftriaxone.**
- (B) Amoxicillin.**
- (C) Penicillin.**
- (D) Gentamicin.**

(329) Which of following drugs is not used in the treatment of leprosy?

- (A) Dapsone.**
- (B) Clofazimine.**
- (C) Rifampicin.**
- (D) Haloperidol.**

(330) A comatose patient was brought to the ER by his family after the ingestion of many sleeping pills. The patient is gasping for breath and application of a mask leads to no response. What is the next course of action?

- (A) Continue one breath every 5 seconds.**
- (B) Continue one breath every 15 seconds.**
- (C) Intubation.**
- (D) Put him in the recovery position.**

(331) Where does the fluid accumulate in grade-1 pitting edema?

- (A) Arteriole.**
- (B) Venule.**
- (C) Interstitial fluid.**
- (D) Capillary.**

(332) What is the mode of transmission and vector of Flavivirus?

- (A) Sand fly.**
- (B) Mosquito.**
- (C) Airborne transmission.**
- (D) Fecal-oral transmission.**

(333) What is the best method to prevent Lyme disease?

- (A) Killing the vector.**
- (B) Wearing clothes of natural fibers.**
- (C) Using antibacterial soap.**
- (D) Application of corticosteroid cream.**

(334) What is the recommended treatment for pyoderma gangrenosum?

- (A) Steroids.**
- (B) Topical antibiotics.**
- (C) Oral antibiotics.**
- (D) Methotrexate.**

(335) What is the recommended treatment for molluscum contagiosum?

- (A) Acyclovir.**
- (D) Broad spectrum antibiotics.**
- (C) It will resolve without treatment.**
- (B) Steroids.**

(336) A patient presented with penile discharge and gave a history of unprotected sex. Urethral discharge culture revealed a Gram-negative diplococcus. What is the diagnosis?

- (A) Chlamydia.**
- (B) Neisseria Gonorrhoeae.**
- (C) Streptococcus.**
- (D) Staphylococcus.**

(337) Which organism causes skin infection due to a cat bite?

- (A) Staphylococcus.**
- (B) Streptococcus.**
- (C) Pasteurella multocida.**
- (D) Fungus.**

(338) What is the antidote to acetaminophen toxicity?

- (A) Pendlinemia.**
- (B) N-acetylcysteine.**
- (C) Potassium.**
- (D) Dexamine.**

(339) An elderly patient presented with leg pain after walking. On examination there was no edema. What is the most likely diagnosis?

- (A) Claudication.
- (B) Compartment syndrome.
- (C) Bone pain.
- (D) DVT.

(340) A patient presented with arthritis and urethral discharge. A culture of discharge was negative for gonorrhea and chlamydia. What is the most likely diagnosis?

- (A) Reiter's syndrome.
- (B) Gonorrhea.
- (C) Rheumatoid arthritis.
- (D) Systemic lupus erythematosus.

(341) A patient presented with a skin rash, diarrhea and dementia. What is the most likely diagnosis?

- (A) Pellagra.
- (B) Dermatitis.
- (C) Vitamin A deficiency.
- (D) Beriberi.

(342) What is the sodium content in normal saline (sodium chloride 0.9%)?

- (A) 50 mEq/L.
- (B) 70 mEq/L.
- (C) 90 mEq/L.
- (D) 154 mEq/L.

(343) Which of the following is a feature of polymyalgia rheumatica?

- (A) Proximal muscle weakness.
- (B) Proximal muscle tenderness.
- (C) Inability to walk.
- (D) Osteophytes observable on joint radiography.

(344) What is the antidote to opioid toxicity?

- (A) Naloxone.
- (B) Aspirin.
- (C) Atropine.
- (D) Vitamin K.

(345) Which of the following is true about Raynaud's phenomenon?

- (A) Pallor is seen, then cyanosis then red finger without other clinical features.
- (B) It is due to exposure to heat.
- (C) It is due to vasodilatation.
- (D) None of the above.

(346) Aluminum salt will decrease the absorption of:

- (A) Tetracycline.**
- (B) Penicillin.**
- (C) Benzodiazepine.**
- (D) Omeprazole.**

(347) What is the chief complaint of patients with genital herpes?

- (A) Painful vesicular and ulcers.**
- (B) Bleeding.**
- (C) Difficulty in urination.**
- (D) Multiple large swellings.**

(348) A young adult presented with a painless penile ulcer with rolled edges. Which investigation should be used to confirm the diagnosis?

- (A) CBC.**
- (B) Dark field microscopy.**
- (C) Culture.**
- (D) None of the above.**

(349) What is the antiviral drug that can cause fever, chills and muscle pain?

- (A) Interferon.**
- (B) Acyclovir.**
- (C) Amantadine.**
- (D) Combivir.**

(350) What is the recommended treatment of scabies?

- (A) Permethrin.**
- (B) Amoxicillin.**
- (C) Metronidazole.**
- (D) Morphine.**

(351) Which drug causes a systemic lupus erythematosus like syndrome?

- (A) Hydralazine.**
- (B) Propranolol.**
- (C) Amoxicillin.**
- (D) Aspirin.**

(352) A patient presented with hand cellulitis, red streaks in the hand and tender axillary lymphadenopathy. This condition is more likely to be associated with:

- (A) Malignancy.**
- (B) Pyoderma.**
- (C) Neuropathy.**
- (D) Lymphangitis.**

(353) The separation of chromatids occurs in:

- (A) Anaphase.**
- (B) Metaphase.**
- (C) Telophase.**
- (D) Prophase.**

(354) Investigation of a 70-year-old patient showed an osteolytic lesion in the skull, monoclonal spike and rouleaux formation. What is the diagnosis?

- (A) Multiple myeloma.**
- (B) Breast cancer.**
- (C) Anemia.**
- (D) Chronic myeloid leukemia.**

(355) A female patient presented with weight loss and erosion of tooth enamel. She also has hypokalemia. What is the likely diagnosis?

- (A) Bulimia nervosa.**
- (B) Anorexia nervosa.**
- (C) Diabetes mellitus.**
- (D) Thyrotoxicosis.**

(356) A 20-year-old female diagnosed with anorexia nervosa presented with multiple fractures due to fragile bones. On examination, her BMI =16. What is the cause of the fragility of her bones?

- (A) Osteoporosis.**
- (B) Hypovitaminosis osteopenia.**
- (C) Osteogenesis imperfect.**
- (D) Osteomalacia.**

(357) Which of the following is most likely to be seen in patient with bulimia nervosa?

- (A) Hypokalemia.**
- (B) Metabolic acidosis.**
- (C) Elevated liver enzyme.**
- (D) Hyponatremia.**

(358) A young female patient is diagnosed with osteoporosis due to an eating disorder. What is the recommended management?

- (A) Weight gain.**
- (B) Vitamin D supplementation.**
- (C) Bisphosphonates.**
- (D) Weight loss.**

(359) A young female patient presented with the effects of poor nutrition and excessive exercise. On examination, her BMI = 18 and she had fine hair all over her body. What is the likely diagnosis?

- (A) Anorexia nervosa.**
- (B) Body dysmorphic disorder.**
- (C) Bulimia nervosa.**
- (D) Generalized anxiety disorder.**

(360) What is the best treatment for bacteroid fragilis?

- (A) Clindamycin.**
- (B) Antifungals.**
- (C) Steroids.**
- (D) All of the above.**

(361) A 20-year-old male was found to have hepatitis B surface antibodies. What does this indicate?

- (A) Previous vaccination against hepatitis B.**
- (B) Previous hepatitis B infection.**
- (C) Active hepatitis B infection.**
- (D) Hepatitis B carrier.**

(362) An 85-year-old male complained of waking many times because of leg pain. This pain is relieved by moving his foot, but recurs at rest. What is the best choice of treatment for this patient?

- (A) Clozapine.**
- (B) Haloperidol.**
- (C) Lorazepam.**
- (D) Ropinirole.**

ANSWERS

INTERNAL MEDICINE



(1) (C) Nitrates.

- Concomitant (regular/intermittent) use of sildenafil with any nitrate is contraindicated.
- It is not known when nitrates can be safely administered following the use of sildenafil; one set of guidelines supports the administration of nitrates after only 24 hours.

(2) (D) Metoprolol.

- Antiarrhythmic drugs as prophylactic agents for sudden cardiac death have been studied in post-myocardial infarction patients with high risk features other than ventricular arrhythmias.
- Beta-blockers improve survival in patients who have had a myocardial infarction in part by reducing the incidence of sudden cardiac death.
- The efficacy of beta-blockers persists in patients treated with certain other anti-arrhythmic drugs, including amiodarone and the class I antiarrhythmic drugs.

(3) (A) Enalapril.

- Enalapril is an angiotensin converting enzyme inhibitors.
- Angiotensin converting enzyme inhibitors prevent the conversion of angiotensin I to angiotensin II, which reduces aldosterone secretion.
- The use of angiotensin converting enzyme inhibitors increases survival, improves symptoms and decreases repeat hospitalizations in heart failure patients.
- The addition of enalapril to conventional therapy in patients with severe congestive heart failure can reduce the risk of mortality by slowing the progression of heart failure and improve symptoms.

(4) (A) Dressler's syndrome.

- Dressler's syndrome occurs in 5-6% of patients with acute myocardial infarction.
- Characteristic symptoms include fever, malaise and pleuropericardial chest pain; the onset of which is
2- 3 weeks after the acute event.
- About 28% of patients develop pleural or pericardial effusion.
- The acute event can also be anything causing inflammation or penetration of the pericardium, cardiac surgery, a stab wound, a non-penetrating blow to the chest, perforation of the heart with a heart catheter, or post-operative cytomegalovirus infection. In these cases it is called post
- pericardotomy or post cardiac injury syndrome.

(5) (A) Changes in leads II, III and aVF.

- In inferior myocardial infarction there are:
1- Pathologic Q waves and evolving ST-T changes in leads II, III and aVF.
2- Q waves are usually largest in lead III, then in lead aVF and smallest in lead II.

(6) (B) Digoxin.

- Digoxin may enhance the bradycardic effect of carvedilol.
- Carvedilol may increase the serum concentration of digoxin.

(7) (A) Zolpidem.

- Selective serotonin re-uptake inhibitors have emerged as effective agents for the treatment of mild to moderate depression.
- Unlike their tricyclic antidepressant predecessors, selective serotonin re-uptake inhibitors have repeatedly been demonstrated to be safe and to have a negligible effect on the cardiovascular system, even in cases of overdose.
- Selective serotonin re-uptake inhibitors have virtually no effect on fast sodium channels or conduction and are not noted to have any proarrhythmic or anti-arrhythmic effects.
- The extended release form of zolpidem has a half-life of 1.5-2.4 hours, but its effects can last longer.
- Zolpidem extended release was developed to improve both sleep-onset insomnia and sleep-maintenance insomnia while avoiding hangover effects, although it has never been directly compared to regular zolpidem.
- Zolpidem extended release has relatively few side effects, with the most common being headache, somnolence and dizziness.
- The duration of deep sleep may be reduced during the first night following discontinuation of Zolpidem.

(8) (A) Synchronized cardioversion.

- Urgent or emergent cardioversion should be considered for patients with active ischemia, significant hypotension, severe heart failure, or the presence of a preexcitation syndrome associated with rapid conduction using the accessory pathway.

(9) (C) Increased serum albumin.

- Nephrotic syndrome is characterized by increased urinary excretion of albumin and other serum proteins, accompanied by hypoproteinemia and edema formation.
- Nephrotic patients have lower serum albumin concentrations than do patients undergoing continuous ambulatory peritoneal dialysis when albumin and protein losses are the same in both groups, suggesting that nephrotic patients may not maximally adapt to the loss of protein.
- The fractional rate of albumin catabolism is increased in nephrotic patients, possibly as a result of increased albumin catabolism by the kidney, but the absolute albumin catabolic rate is decreased in nephrotic patients.
- The rate of albumin synthesis may be increased, but not sufficiently to maintain normal serum albumin concentration or albumin pools.
- Augmentation of dietary protein in nephrotic rats directly stimulates albumin synthesis by increasing albumin mRNA content in the liver, but also causes an increase in glomerular permeability to macromolecules so that much, if not all, of the excess albumin synthesized is lost in the urine.
- When dietary protein is restricted, the rate of albumin synthesis is not increased in either nephrotic patients or in rats, despite severe hypoalbuminemia.
- Although dietary protein supplementation may lead to a positive nitrogen balance, dietary protein supplementation alone does not cause an increase in serum albumin concentration or body albumin pools and may instead cause further albumin pool depletion because of the changes induced in glomerular permselectivity.
- The use of angiotensin-converting enzyme inhibitors may blunt the increased albuminuria caused by dietary protein supplementation and allow albumin stores to be increased.

(10) (A) Ventricular septal defect.

Most patients with large ventricular septal defect have early, large, left to right shunting with the development of heart failure during infancy.

- In rare cases, the pulmonary vascular resistance does not fall postnatally, left to right shunting is less marked and presentation with Eisenmenger syndrome occurs sometime during late childhood to early adulthood.
- The right to left shunt causes cyanosis.
- Chest x-ray in patients with uncomplicated small ventricular septal defect normally shows a normal cardiac shadow and pulmonary vascular markings.
- With larger ventricular septal defect, the chest x-ray may show cardiomegaly with prominent left ventricular contour and left atrial and pulmonary artery enlargement due to volume overload directly related to the magnitude of the shunt.
- The chest x-ray may also show evidence of shunt vascularity.
- In Eisenmenger syndrome, chest x-ray usually shows dilatation of the central pulmonary arteries, peripheral pulmonary artery (pruning; abrupt attenuation and/or termination of peripheral pulmonary artery branches) and neovascularity.

(11) (A) Calcium channel blockers.

- Acute coronary syndromes result from the acute obstruction of a coronary artery.
- Consequences depend on the degree and location of the obstruction and range from unstable angina to non-ST-segment elevation myocardial infarction (NSTEMI), ST-segment elevation myocardial infarction (STEMI) and sudden cardiac death.
- Symptoms are similar in each of these syndromes (except sudden death) and include chest discomfort with or without dyspnea, nausea and diaphoresis.
- Diagnosis is achieved by ECG and detecting the presence or absence of serologic markers.
- Treatments include antiplatelet drugs, anticoagulants, nitrates, beta-blockers and for ST-segment elevation myocardial infarction (STEMI), emergency reperfusion via fibrinolytic drugs, percutaneous intervention, or, occasionally, coronary artery bypass graft surgery.

Calcium channel blockers have not been shown to be beneficial in acute myocardial infarction and they may exert deleterious adverse effects alone or when given with other medications, therefore, calcium channel blockers should generally be avoided.

(12) (A) Streptokinase, nitroglycerin, aspirin and beta-blocker.

Myocardial infarction occurs when cardiac myocytes die due to prolonged myocardial ischemia.

- The rapid triage procedure for chest pain is:
 - 1- Aspirin 150-300 mg chewed and clopidogrel 300 mg oral gel.
 - 2- Sublingual glyceryl trinitrate 0.3-1 mg. oxygen-nasal cannula 2-4 L/min.
 - 3- Brief assessment of the patient's history and risk factors.
 - 4- Physical examination.
 - 5- IV access to allow the assessment of blood markers (plus CBC, biochemistry, lipids, glucose).
 - 6- 12-lead ECG.
 - 7- IV administration of an opiate, e.g. diamorphine (or morphine) 2.5-5 mg and an antiemetic, e.g. metoclopramide 10 mg.

8- Prescription of a beta-blocker (if no contraindication) for ongoing chest pain, hypertension and tachycardia.

9- If primary percutaneous coronary intervention is available, a glycoprotein IIb/IIIa inhibitor should be given, alternatively give thrombolysis.

- Fibrinolytic agents enhance the breakdown of occlusive thromboses through the activation of plasminogen to form plasmin.
- The initial thrombolytic agent used in clinical trials was streptokinase.
- This agent is derived from bacteria, which can lead to the development of neutralizing antibodies that limit its repeated use.
- The combination of streptokinase and aspirin is significantly more effective than either agent alone.

(13) (B) Interstitial edema.

- Heart failure is a common clinical syndrome characterized by dyspnea, fatigue and signs of volume overload, which may include peripheral edema and pulmonary rales.
- Heart failure has high morbidity and mortality rates, especially in older persons.
- Many conditions, such as coronary artery disease, hypertension, valvular heart disease and diabetes mellitus, can lead to decompensation of chronic heart failure.
- Up to 40-50% of patients with heart failure have diastolic heart failure with preserved left ventricular function and the overall mortality rate is similar to that of systolic heart failure.
- The initial evaluation includes a history and physical examination, chest radiography, electrocardiography and laboratory assessment to identify causes or precipitating factors.
- A displaced cardiac apex, a third heart sound and chest radiography findings of venous congestion or interstitial edema are useful in identifying heart failure.

(14) (A) Atrial fibrillation.

- Cardiogenic emboli are a common source of recurrent stroke.
- They may account for up to 20% of acute strokes and have been reported to have the highest one-month mortality rate.
- Cardioembolic strokes may be isolated, multiple and in a single hemisphere, or scattered and bilateral; the latter two types indicate multiple vascular distributions and are more commonly found in cardioembolism.
- Multiple and bilateral infarcts can be the result of embolic showers or recurrent emboli.
- Other possible causes of single and bilateral hemispheric infarctions include emboli originating from the aortic arch and diffuse thrombotic or inflammatory processes that can lead to multiple small-vessel occlusions.

(15) (B) Terazosin.

- Terazosin is a quinazoline compound that counteracts alpha₁-induced adrenergic contractions of the bladder neck, facilitating urinary flow in the presence of benign prostatic hyperplasia.
- It is indicated for the treatment of symptomatic benign prostatic hyperplasia and hypertension.
- Its effect on voiding symptoms and flow rates is dose-dependent.
- It improves irritative and obstructive voiding symptoms.
- Improvement in flow rate is objective.

(16) (A) Left atrial hypertrophy and dilatation.

Mitral stenosis is the narrowing of the mitral orifice that impedes blood flow from the left atrium to the left ventricle.

- A mitral orifice of less than 1 cm indicates severe stenosis.
- Almost invariably, the cause is rheumatic fever.

The left atrial size and pressure increase progressively to compensate for mitral stenosis; pulmonary venous and capillary pressures also increase and may cause secondary pulmonary hypertension, leading to right ventricular heart failure and tricuspid and pulmonic regurgitation.

(17) (B) Ventricular septal defect.

Tetralogy of Fallot consists of 4 features:

- 1- A large ventricular septal defect.
 - 2- Right ventricular outflow tract and pulmonary valve obstruction.
 - 3- Right ventricular hypertrophy.
 - 4- Over-riding of the aorta.
- Symptoms include cyanosis, dyspnea with feeding, poor growth and Tet spells (sudden, potentially lethal episodes of severe cyanosis).
 - A harsh systolic murmur at the left upper sternal border with a single second heart sound (S2) is common. Diagnosis is achieved by echocardiography or cardiac catheterization.
 - The definitive treatment is surgical repair.

(18) (B) Oxygen uptake

- The Fick method for cardiac output determination is a form of indicator dilution in which exogenous indicators are not required, but instead, transported oxygen serves this purpose.
- This method describes a means of determining blood flow by measuring overall oxygen uptake and content in the blood.

The Fick equation relates cardiac output to oxygen consumption and blood oxygen content and is recognizable as a special form of the generalized indicator dilution equation.

(19) (D) Increase HDL

Niacin is the most effective lipid-regulating agent clinically available to raise HDL. Nicotinic acid (niacin) is the most effective therapy for high risk patients who have low HDL levels without any other lipid abnormality.

- Nicotinic acid was found to raise serum HDL by 30% versus only 10% with gemfibrozil.
ie combination of gemfibrozil and nicotinic acid is more effective than monotherapy, raising HDL by as much as 45%.

(20) (C) Increase the intake of fruit and vegetables.

Soluble fiber increases the excretion of fecal bile acid and the removal of cholesterol.

Good sources of soluble fiber include oat products, barley, fruits and vegetables.

One daily serving of oat bran or oatmeal decreases total cholesterol levels by up to 3%.

Pectin, a soluble fiber found in fruit, also decreases LDL levels.

Exchanging soluble fiber for fat intake produces even greater reductions in LDL levels.

(21) (C) Angiotensin converting enzyme inhibitors.

- The management of heart failure due to systolic dysfunction involves the correction of systemic factors, lifestyle modification, treatment of the underlying cardiac diseases, device (implantable cardioverter-defibrillator and cardiac resynchronization) therapy as indicated, as well as pharmacologic therapy to relieve symptoms and prolong survival.
- For patients with systolic heart failure and volume overload, diuretics are recommended.
- For patients with heart failure with left ventricular systolic dysfunction (left ventricular ejection fraction <40%), angiotensin converting enzyme inhibitors therapy is recommended.
- For patients with systolic heart failure who do not tolerate angiotensin converting enzyme inhibitors, an angiotensin II receptor blocker is recommended as an alternative that provides a similar survival benefit.
- For patients with current or prior heart failure and left ventricular ejection fraction <40%, therapy with a beta-blocker is recommended.

(22) (D) Hypertrophic cardiomyopathy.

- Hypertrophic cardiomyopathy is a genetic disorder that is typically inherited in an autosomal dominant fashion with variable penetrance and variable expressivity.
- The disease has complex symptomatology and potentially devastating consequences for patients and their families.
- Children and adolescents with hypertrophic cardiomyopathy are often asymptomatic and diagnosed during family screening.
- However, since echocardiography may be normal during childhood, a single negative screening examination may not exclude the disease.
- The disorder has a variable presentation and carries a high incidence of sudden death.
- In fact, hypertrophic cardiomyopathy is the leading cause of sudden cardiac death in preadolescent and adolescent children.
- The hallmark of the disorder is myocardial hypertrophy that is inappropriate, often asymmetrical and occurs in the absence of an obvious inciting hypertrophy stimulus.

***23) (C) Echocardiogram.**

- An echocardiogram, often referred to as a cardiac echo, or simply an echo, is a sonogram of the heart.
- Among the acquired heart valve lesions, mitral stenosis is associated with the highest risk of systemic thromboembolism.
- The risk increases markedly following the onset of atrial fibrillation and is considerably higher for patients with mitral stenosis compared to those with isolated mitral regurgitation.
- Patients who suffer a first embolus are at increased risk of repeat embolization, particularly over the ensuing 6 months.
- Not infrequently, the first presentation of mitral stenosis is an embolic event; most commonly cerebral.
- Prior to surgical treatment and the widespread use of warfarin as an anticoagulant, as many as 30% of patients with mitral stenosis experienced an embolic event during the course of the disease.
- There are three major clinical and echocardiographic predictors of embolism: left atrial thrombus, the degree of reduction in mitral valve area and significant aortic regurgitation

(24) (A) Stable angina.

Angina may be a vague, barely troublesome ache or may rapidly become a severe, intense precordial crushing sensation.

It is rarely described as a pain.

Discomfort is most commonly felt beneath the sternum, although the location varies.

Discomfort may radiate to the left shoulder and down the inside of the left arm, even to the fingers;

< aight through to the back; into the throat, jaws and teeth; and, occasionally, down the inside of the right arm.

may also be felt in the upper abdomen.

The discomfort of angina is never above the ears or below the umbilicus.

Angina pectoris is typically triggered by exertion or strong emotion, usually persists no more than a few minutes and subsides with rest.

Response to exertion is usually predictable, but in some patients, exercise that is tolerated one day may precipitate angina the next because of variations in arterial tone.

(25) (C) Congestive heart failure.

Congestive heart failure is one of the most common causes of transudative pleural effusion.

The most important diagnostic step in the evaluation of a pleural effusion is a thoracentesis, the accurate classification of pleural fluid into transudates and exudates is clinically significant.

The usual criteria for categorization as an exudate are: a pleural fluid-to-serum protein ratio greater than 0.5; a pleural fluid lactate dehydrogenase concentration greater than 200 units/liter and a pleural fluid-to-serum lactate dehydrogenase ratio greater than 0.6.

An exudative process usually requires more extensive evaluation to exclude occult malignancy or infection.

- ransudative effusions are caused by a combination of increased hydrostatic pressure and decreased plasma oncotic pressure.

Heart failure is the most common cause, followed by cirrhosis with ascites and then by hypoalbuminemia, usually due to nephrotic syndrome.

(26) (A) Right heart failure (right ventricular failure).

- In right ventricular failure, the most common symptoms are ankle swelling and fatigue.

Sometimes patients feel a sensation of fullness in the abdomen or neck.

Hepatic congestion can cause right upper abdominal quadrant discomfort and stomach and intestinal digestion can cause anorexia and abdominal bloating.

Signs of right ventricular failure include non-tender peripheral pitting edema (digital pressure leaves visible and palpable imprints, sometimes quite deep) in the feet and ankles; an enlarged and sometimes pulsatile liver palpable below the right costal margin; abdominal swelling and ascites; and visible elevation of the jugular venous pressure, sometimes with large a or v waves that are visible even when the patient is seated or standing.

(27) (A) Carotid artery massage.

Carotid sinus massage is a simple bedside maneuver that helps to clarify the type and sometimes also the mechanism of different rhythm disturbances.

- The major indication for carotid sinus massage is the diagnosis of tachyarrhythmias in which the atrial activity is either absent or intermittently present

- Carotid sinus massage is also useful in some patients with normal heart rate; increased vagal tone may normalize a bundle branch block or localize the site of type I second-degree atrioventricular block and can be used to evaluate the sensing function of permanent pacemakers.
- Carotid sinus massage is also an important diagnostic procedure in patients with suspected hypersensitivity of the carotid sinus.
- Massage of the carotid sinus is contraindicated in patients with diseased carotid arteries because of the risk of cerebrovascular accident.
- In rare instances, carotid sinus massage may initiate ventricular tachycardia.

(28) (B) Heat exhaustion.

- Heat exhaustion is characterized by the inability to maintain adequate cardiac output due to strenuous physical exercise and environmental heat stress.
- Acute dehydration may be present, but is not required for the diagnosis.
- Heat exhaustion is caused by a water and electrolyte imbalance due to heat exposure, with or without exertion.
- Symptoms are often vague and patients may not realize that heat is the cause.
- Symptoms may include weakness, dizziness, headache, nausea and sometimes vomiting.
- Syncope due to standing for long periods in the heat (heat syncope) is common and may mimic cardiovascular disorders.
- On examination, patients appear tired and are usually sweaty and tachycardic.
- Mental status is typically normal, unlike in heat stroke.
- The core body temperature is usually normal and, when elevated, usually does not exceed 40°C.

(29) (B) High serum LDL.

- High concentrations of LDL in the blood are a particularly important risk factor for atherosclerosis.
- The oxidative modification of LDL appears to be one mechanism by which LDL promotes atherosclerosis; oxidized LDL may lead to atherogenesis via a number of mechanisms.
- Higher LDL concentrations have been associated with an increased incidence of coronary heart disease.
- Elevated plasma concentrations of oxidized LDL also are associated with coronary heart disease.
- Many investigators believe that the single most atherogenic agent is LDL.

(30) (A) Amoxicillin 2 gm before the surgery.

- The risk of infective endocarditis is generally considered to be the highest for dental procedures that involve manipulation of gingival tissue or the periapical region of the teeth, or perforation of the oral mucosa; this does not include routine cleaning.
- All individuals at risk of developing infective endocarditis should establish and maintain a program of oral health care including regular professional care, the regular use of manual or powered toothbrushes, dental floss and other plaque removing devices.
- The primary antibiotic regimen for most patients, including those with prosthetic valves, is amoxicillin 2 gm orally 30-60 minutes before the procedure: a second dose is not necessary.

(31) (A) Constrictive pericarditis.

signs and symptoms of constrictive pericarditis, such as Jussieu's sign, pulsus doxus, occur due to reduced ventricular filling as also occurs in cardiac tamnade Systemic venous congestion (ascites dependent edema hepatomegaly and raised jugular venous pressure) Monary venous Distension dyspnea, cough orthopnea, paroxysmal nocturnal dyspnea) Less commonly reduced cardiac output fatigue, hypotension and reflex tachycardia).

pericardial knock) heard in early diastole at the lower left sternal border mild dilatation 30% of cases have atrial fibrillation!

(32) (B) Abdominal aortic aneurysm.

aneurysms are abnormal dilations of arteries caused by weakening of the arterial wall usually associated with atherosclerosis

causes include trauma vasculitis, cystic medial necrosis and postsurgical anastomotic disruption, common causes are syphilis and localized bacterial or fungal infection, usually due to sepsis or infective endocarditis, which weaken the arterial wall and lead to infected (mycotic)

aneurysms management is the strongest factors:

risk factors include hypertension older age (the peak incidence is between 70-80-year-old), family history race (more common in whites than in blacks) and male sex

an aortic aneurysm presents clinically in a variety of ways

asymptomatic abdominal aortic aneurysm have no symptoms

most common complication is rupture

may or may not be associated with abdominal aortic aneurysm rupture or other associated symptoms.

(33) (B) Acute artery embolism.

arterial embolism originates in the heart and travel to the extremities the lower extremities are affected much more frequently than the upper extremities. In the majority of cases embolism in patients with significant underlying cardiac disease.

Severity of the patient's underlying cardiac condition may increase the need for surgery and limit the options available for restoring blood flow to the ischemic extremity.

Potential sources of emboli from the heart include left ventricular thrombus formation following myocardial infarction and atrial thrombus in patients with atrial fibrillation.

Up to 75% of patients with embolism in the lower extremities have a history of recent myocardial infarction or atrial fibrillation.

(34) (B) Eat no more than 4 gm salt per day.

Patients with heart failure can benefit from paying attention to exercise diet and nutrition.

Restricted activity promotes physical deconditioning, so physical activity should be encouraged

Restriction of dietary sodium to 2-3 gm/day is recommended

Restriction of fluid intake to 2 liters/day is recommended for patients with evidence of

hyponatremia (<135 mEq/dl) and/or those whose fluid status is difficult to control despite sodium restriction and

the use of high-dose diuretics

nutritional supplements are recommended for patients with evidence of cardiac cachexia

(35) (B) Fast recovery.

- Cardiac syncope can occur in any posture.
- There is usually little warning and recovery is rapid.
- Frequently, syncope due to tachyarrhythmia occurs with no perception of palpitations.

Syncope should always be investigated due to the risk of threatening ventricular tachyarrhythmia in any patient with a history of myocardial infarction or heart failure, or a family history of sudden, unexpected death at a young age (<40-year-old).

- Such cases require urgent cardiological assessment
- Mechanical obstruction should always be excluded in patients with exertional syncope; however, the majority of patients with conditions such as aortic stenosis or hypertrophic cardiomyopathy experience syncope either at rest or during low-level activity.
- Finally, a detailed drug history should be obtained to determine whether the patient is taking any drug associated with an acquired form of long QT syndrome.

(36) (A) Subarachnoid hemorrhage.

- Subarachnoid hemorrhage is sudden bleeding into the subarachnoid space.
- The most common cause of spontaneous bleeding is a ruptured aneurysm.
- Symptoms include sudden, severe headache, usually with loss or impairment of consciousness.
- High blood pressure is the leading cause of subarachnoid hemorrhage.
- Heavy lifting or straining can cause pressure to rise in the brain and may lead to rupture of an aneurysm.
- Strong emotions, such as being upset or angry, can raise blood pressure and can subsequently cause aneurysms to rupture.
- Blood thinners (such as warfarin), some medications and prescription drugs (including diet pills that act as stimulants such as ephedrine and amphetamines) and harmful drugs like cocaine can cause aneurysms to rupture and bleed.
- Diagnosis is achieved by CT or MRI. If the results of neuroimaging are normal, diagnosis is achieved by CSF analysis.
- Treatments include supportive measures and neurosurgery or endovascular measures, preferably in a referral center.

(37) (B) Phentolamine.

- Phentolamine is a potent competitive antagonist at both α_1 and α_2 receptors.
- α_1 -receptor antagonists have been used successfully in patients with benign prostatic hyperplasia.
- These drugs are particularly useful in patients who also have hypertension.
- It causes a reduction in peripheral resistance through the blockade of α_1 receptors and possibly α_2 receptors on vascular smooth muscles.

- Since phentolamine potently blocks both alpha receptors, antagonism of presynaptic alpha₂ receptors may lead to enhanced release of norepinephrine from sympathetic nerves which may contribute to marked cardiac stimulation via unblocked alpha adrenoceptors.
- Phentolamine is an agonist at muscarinic and H₁ and H₂ histamine receptors.

(38) (A) This is not necessary.

- In the past, patients with nearly every type of congenital heart defect needed to receive antibiotics one hour before dental procedures or operations on the mouth, throat, gastrointestinal tract, genital organs, or urinary tract.
- Today, antibiotics before dental procedures are only recommended for patients with the highest risk of infective endocarditis; e.g. those who have:
 - 1- An artificial heart valve or who have had a heart valve repaired with artificial material.
 - 2- A history of endocarditis.
 - 3- Had a heart transplant due to abnormal heart valve function.
 - 4- Certain congenital heart defects, including cyanotic congenital heart disease (birth defects with oxygen levels lower than normal) that has not been fully repaired, including children who have had surgical shunts and conduits.
 - 5- A congenital heart defect that has been completely repaired with artificial material or a device within 6 months.
 - 6- Repaired congenital heart disease with residual defects, such as persisting leaks or abnormal flow at or adjacent to a prosthetic patch or prosthetic device.

(39) (A) Cardiac syncope.

- Syncope in patients with aortic stenosis is often associated with exertion.
In most such cases, syncope results from an inability to produce a compensatory increase in cardiac output (due to the obstruction), which normally occurs in response to exercise-induced peripheral vasodilation.
- In others, the most probable cause of syncope is an exaggerated, more malignant form of a vasovagal response.
This may have the same mechanism as vasovagal syncope, which is due to the stimulation of ventricular mechanoreceptors.
- « bradyarrhythmia or ventricular tachyarrhythmia may also be a cause for syncope in some of these patients.

(40) (A) Mid-diastolic low pitched rumbling murmur.

Mitral stenosis is a narrowing of the mitral orifice that impedes blood flow from the left atrium to the left ventricle.

The almost invariable cause is rheumatic fever.

Common complications are pulmonary hypertension, atrial fibrillation and thromboembolism.

Symptoms are those of heart failure; signs include an opening snap and a diastolic murmur.

The diastolic murmur of mitral stenosis is of a low pitch, is rumbling in character and is best heard at the apex of the heart with the patient in the left lateral position.

The murmur commences after the opening snap of the mitral valve and the duration of the murmur correlates with the severity of the stenosis.

(41) (D) Tetralogy of Fallot.

- Infective endocarditis is a problem in patients with adult congenital heart disease.
- Tetralogy of Fallot is one of the most common manifestations of congenital heart disease, which carries a high risk for the development of infective endocarditis.
- Certain subtypes of congenital heart diseases are known to increase the risk for infective endocarditis.
- Tetralogy of Fallot represents the largest proportion of infective endocarditis cases, followed by bicuspid aortic valve problems.
- Repaired Tetralogy of Fallot often has residual aortic regurgitation; a subtype for aortic valve infective endocarditis.

(42) (B) Isotonic exercise.

- Three types of muscular contraction or exercise can be applied as a stress to the cardiovascular system: isometric (static), isotonic (dynamic or locomotory) and resistive (a combination of isometric and isotonic).
- Isometric exercise, defined as a muscular contraction without movement (e.g. handgrip), imposes a greater pressure than volume load on the left ventricle in relation to the body's ability to supply oxygen.
- The cardiovascular response to isometric exercise is difficult to grade.
- Cardiac output is not increased to the same extent as in isotonic exercise because increased resistance in active muscle groups limits blood flow.
- Isotonic exercise, defined as muscular contraction resulting in movement, primarily provides a volume load to the left ventricle and the cardiovascular response is proportional to the size of the muscle mass and the intensity of the exercise.
- Resistive exercise combines both isometric and isotonic exercises by using muscular contraction with movement, as in free weight lifting.

(43) (D) Obesity.

- Obesity and hypertension are on the rise in the world.
- Hypertension seems to be the most common obesity-related health problem and visceral obesity seems to be the major cause.
- In addition, the risk of dyslipidemia is increased with rising blood pressure and BMI.

(44) (A) Digoxin.

- In hypertrophic obstructive cardiomyopathy inotropic drugs should be avoided if possible.
- Nitrates and sympathomimetic amines should also be avoided, except in patients with concomitant coronary artery disease.
- Digitalis should be avoided because glycosides are contraindicated, except in patients with uncontrolled atrial fibrillation.
- Caution should be exercised with diuretics because of their potential adverse effects on the left ventricular outflow gradient and ventricular volume.
- Appropriate medications include beta-blocker, calcium channel blocker and, rarely, diltiazem, amiodarone and disopyramide.
- Antitussives may be administered as needed to prevent coughing.

(45) (B) Furosemide.

Patients with decompensated heart failure are usually volume overloaded. In the acute situation in which cardiogenic pulmonary edema develops without significant volume overload (e.g. with hypertensive emergency, acute aortic or mitral valvular insufficiency), fluid overload exacerbates symptoms and improves oxygenation. Patients with acute decompensated heart failure and evidence of volume overload, regardless of the severity, should be treated with IV diuretics as part of their initial therapy; rare exceptions include patients with severe hypotension or cardiogenic shock. In such cases the underlying cause for hemodynamic instability should be sought and the patient requires hemodynamic and mechanical ventilatory support. Patients with aortic stenosis with volume overload should be managed with diuretics but caution should be applied. Patients admitted with significant fluid overload should receive diuretic therapy without delay in the ED or outpatient clinic; as early intervention may produce better outcomes. Intravenous rather than oral administration of diuretics is recommended because of the greater and more consistent drug bioavailability associated with this method.

(46) (A) Mitral stenosis.

involvement of the mitral valve is present in approximately 90% of individuals with rheumatic heart disease. Atrial fibrillation is common in patients with mitral stenosis due to the elevation of left atrial pressure and consequent left atrial enlargement. The most common and often only symptom of mitral stenosis is dyspnea, which occurs in up to 70% of symptomatic patients. Dyspnea often results from the elevation in left atrial pressure, leading to reduced compliance of the lungs and a decrease in vital capacity due to vascular congestion and interstitial edema. The increased pulmonary pressures and vascular congestion can lead to hemoptysis as blood-tinged sputum induced by the severe coughing associated with paroxysmal nocturnal dyspnea or bronchitis, or as pink frothy sputum resulting from pulmonary edema. Paroxysmal atrial fibrillation and infective endocarditis should also be considered when embolization occurs in patients with mitral stenosis who are in sinus rhythm. When mitral stenosis is severe and the cardiac output is diminished, there is vasoconstriction, resulting in pinkish-purple patches on the cheeks (mitral facies).

(47) (A) Beta-blockers.

In heart failure, beta-adrenergic blockers are used for neurohormonal modification, improvement of symptoms and left ventricular ejection fraction, the prevention of arrhythmia and the control of ventricular rate. Treatment with carvedilol, metoprolol succinate (controlled release) or bisoprolol decreases mortality by at least 34% in patients with heart failure. These agents differ pharmacologically; however, they have all demonstrated benefits and any of the three can be used.

(48) (C) Systolic murmur is present throughout the pericardium.

- Coarctation of the aorta is a localized narrowing of the aortic lumen

»>ical physical examination findings include hypertension in the upper extremities, diminished or delayed femoral pulses and low or unobtainable arterial blood pressure in the lower extremities.

An ejection systolic murmur of grade 2-3 of 6 is often present at the upper left sternal border. It is at the axilla and sometimes, most prominently, in the left interscapular area.

- An apical ejection¹ click is present if a bicuspid aortic valve is also present
- Dilated intercostal collateral arteries may cause a continuous murmur in the intercostal spaces.
- Affected females may have Turner syndrome; a congenital disorder causing lymphedema of the feet, a webbed neck, a shield-shaped chest, cubitus valgus and widely spaced nipples.
- Heart size is normal unless heart failure supervenes
- Dilated intercostal collateral arteries may erode the 3rd-8th ribs, causing rib notching, but this is seldom seen before 5-year-old

(49) (A) Ventricular tachycardia.

Cannon waves are very large a-waves that occur when the right atrium contracts against a closed tricuspid valve.

-They occur irregularly in complete heart block and ventricular tachycardia; conditions that are characterized by atrioventricular dissociation with random occasional simultaneous atrial and ventricular contractions

- Ventricular tachycardia may be reflected in symptoms such as syncope, palpitations and dyspnea
- With some exceptions, ventricular tachycardia is associated with an increased risk of sudden death.

(50) (B) The most effective diagnostic tool is ECG.

- The diagnosis of acute pericarditis is usually suspected based on a history of characteristic pleuritic chest pain and confirmed if a pericardial friction rub is present.
- Pericarditis should also be suspected in a patient with persistent fever and pericardial effusion or new unexplained cardiomegaly.
- Additional testing, which typically includes blood work, chest radiography, electrocardiography and echocardiography, can support the diagnosis but is frequently normal or unrevealing.
- The electrocardiogram is usually the most helpful test in the evaluation of patients with suspected acute pericarditis.
- Echocardiography is often normal, but can be an essential part of the evaluation if there is evidence of an associated pericardial effusion and/or signs of cardiac tamponade.

(51) (A) Cerebrovascular accident.

- Atrial fibrillation is the most common cardiac arrhythmia that can have adverse consequences related to a reduction in cardiac output and to atrial and aortic appendage thrombus formation (stroke and peripheral embolization)

In addition, affected patients may be at increased risk of mortality.

- The risk of stroke from atrial fibrillation that lasts longer than 24 hours is a major concern and is usually addressed by prescribing a blood thinner (warfarin or dabigatran).
- The risk of embolic stroke is increased in patients older than 75-year-old; so it is recommended that all patients older than 75-year-old should be treated, unless a compelling contraindication is noted.
- Ischemic stroke is a risk, not only for patients with a history of atrial fibrillation, but also for patients without atrial fibrillation who have a history of coronary heart disease.

(52) (C) Atherosclerosis with narrowing of arteries.

Coronary atherosclerosis is often irregularly distributed in different vessels but typically occurs at points turbulence (e.g. vessel bifurcations).

the atheromatous plaque grows, the arterial lumen progressively narrows, resulting in ischemia often causing angina pectoris).

The degree of stenosis required to cause ischemia varies with oxygen demand.

The consequences of acute ischemia, collectively referred to as acute coronary syndromes, depend on the location and degree of obstruction and range from unstable angina to transmural infarction and sudden death.

coronary artery spasm is a transient, focal increase in vascular tone, markedly narrowing the lumen and reducing blood flow: symptomatic ischemia may result.

Marked narrowing can trigger thrombus formation, causing infarction or life-threatening arrhythmia.

(53) (A) Hydrochlorothiazide

Hyperuricemia is a relatively common finding in patients treated with a loop or thiazide diuretic and may, over a period of time, lead to gouty arthritis.

Diuretics reduce urate excretion by both directly and indirectly increasing urate reabsorption and decreasing urate secretion: the effect is dose dependent.

Treatment of asymptomatic hyperuricemia is not necessary.

If diuretic-induced gout occurs, it is usually treated with a urate lowering drug such as allopurinol.

Thiazide diuretics selectively enhance urate reabsorption.

(54) (B) Ventricular septal defect.

- In the case of a large ventricular septal defect that persists into late childhood without intervention, the increase in pulmonary artery blood flow from persistent left-to-right shunting results in the development of pulmonary vascular remodeling and histological evidence of pulmonary arteriolar intimal and medial hypertrophy.

- The resulting elevated pulmonary artery vascular resistance leads to right ventricular pressure overload and right ventricular hypertrophy.

When pulmonary vascular resistance exceeds systemic vascular resistance, the ultimate reversal of flow with right-to-left shunting causes cyanosis: this condition is called Eisenmenger syndrome.

Dyspnea and fatigue in patients with ventricular septal defect result from either progressive left ventricular overload due to the ventricular septal defect or from significant aortic regurgitation, pulmonary hypertension or a double-chambered right ventricle.

Syncope is often exertional and caused by severe pulmonary hypertension, right ventricular outflow obstruction due to a large prolapsing aortic valve cusp, or a large aneurysm of the membranous septum or double-chambered right ventricle.

- Patients with ventricular septal defect may also present with arrhythmias or sudden death.

(55) (A) Hydrochlorothiazide.

Most patients with cirrhosis and ascites require both dietary sodium restriction and diuretics.

- When given the option of a more restrictive diet without diuretics or less restrictive diet with diuretics, most patients choose the latter.

- The approach is to prescribe diuretics in combination with sodium restriction to all patients with cirrhosis and clinically detectable ascites.

- The diuretic doses can be tapered or temporarily discontinued if weight loss is rapid.

Diuretic therapy typically consists of treatment with spironolactone and furosemide.

(56) (A) Adenosine.

- Short-term management treatment options can involve both pharmacologic and nonpharmacologic measures.
- In most patients, the drug of choice for acute therapy is either adenosine or verapamil.
- The use of IV adenosine or the calcium channel blockers, verapamil, are considered safe and effective therapies for controlling supraventricular tachycardia.
- The advantages of adenosine include a rapid onset of action (typically within 10-25 seconds via a peripheral vein), short half-life (less than 10 seconds) and a high degree of efficacy.
- The short half-life of this agent minimizes the severity of adverse effects, which include facial flushing, chest tightness, dyspnea and transient sinus arrest and/or atrioventricular block.
- The use of adenosine is contraindicated in patients with sinus node dysfunction or second or third degree block and should be used with caution in patients with severe obstructive lung diseases.

(57) (C) Diuretics.

- In general, three classes of drugs are considered first-line therapy for the treatment of hypertension in elderly patients: low-dose thiazide diuretics (e.g. 12.5-25 mg/day of chlorthalidone), long-acting calcium channel blockers (most often dihydropyridines) and angiotensin converting enzyme inhibitors or angiotensin II receptor blockers.
- A long-acting dihydropyridine or a thiazide diuretic is generally preferred in elderly patients because of their high efficacy in blood pressure lowering.

(58) (B) Increased peripheral vascular resistance.

- Because $\text{blood pressure} = \text{cardiac output} \times \text{total peripheral vascular resistance}$, pathogenic mechanisms must involve: increased cardiac output, increased total peripheral vascular resistance, or both.
- In most patients with hypertension, cardiac output is normal or slightly increased and total peripheral vascular resistance is increased.
- This pattern is typical of primary hypertension and hypertension due to primary aldosteronism, pheochromocytoma, renovascular disease and renal parenchymal disease.
- The progression of essential hypertension begins with prehypertension in persons between 10-30-year-old (due to increased cardiac output) and then advances to early hypertension in persons between 20-40-year-old (in which increased peripheral resistance is prominent), then to established hypertension in persons 30-50-year-old and finally to complicated hypertension in persons 40-60-year-old.

(59) (A) P waves are caused by atrial depolarization.

- In a normal ECG:
- The P wave represents atrial depolarization.
- The PR interval includes the P wave as well as the PR segment; it is measured from the beginning of the P wave to the first part of the QRS complex (which may be a Q wave or R wave).
- It includes time for atrial depolarization (the P wave) and conduction through the AV node and the His-Purkinje system (which constitutes the PR segment).
- The QRS complex represents the duration of ventricular depolarization.
- The ST segment occurs after ventricular depolarization has ended and before repolarization has begun; it is a time of electrocardiographic silence.
- The T wave represents the period of ventricular repolarization.

(60) (C) There is no need for prophylaxis in this patient.

Antibiotic prophylaxis to prevent bacterial endocarditis is no longer recommended in patients with subvalvar aortic stenosis, except in those with a history of endocarditis or with a repair that required prosthetic material or a device.

- **In the latter, antibiotic prophylaxis is recommended for the first 6 months after the repair unless a residual defect is present, in which case prophylactic antibiotics are continued beyond the six-month period.**

(61) (A) Aortic angiogram.

- **This is a case of aortic dissection.**

- **The distinctive symptoms of an aortic dissection usually make the diagnosis obvious to doctors, although the disorder produces a variety of symptoms that sometimes resemble those of other disorders.**

- **In about 2/3 of people with aortic dissection, pulses in the arms and legs are diminished or absent.**

- **A dissection that is moving backward toward the heart may cause a murmur that can be heard through a stethoscope.**

- **Aortic dissection is usually diagnosed using imaging techniques before the results of blood work are interpreted.**

- **The choice of imaging techniques depends, in part, on whether or not the patient is hemodynamically stable.**

- **Aortography is still considered by some as the standard diagnostic test for aortic dissection.**

(62) (B) By dilating coronary arteries.

- **The heart is the pump that supplies blood, oxygen and other nutrients to the entire body.**

- **However, the heart itself is an organ that requires its own blood supply to maintain proper function.**

- **The coronary arteries supply blood, oxygen and nutrients to the heart muscle and the conduction system.**

- **Because the left ventricle muscle mass exceeds that of the right ventricle and has a greater blood and oxygen requirement, the coronary arteries supply more blood to the left ventricle.**

- **Coronary veins remove waste and oxygen poor blood from the myocardium, dumping blood back to the coronary sinus.**

- **In the normal resting heart, unlike other organs, almost all the oxygen is extracted from the blood during its passage through the arterioles and the capillary beds.**

- **Therefore, when faced with increased oxygen demand during exercise or stress, the heart is dependent upon the coronary arteries to increase their diameter through dilatation.**

(63) (B) Ventricular dysfunction.

- **Sudden cardiac arrest and sudden cardiac death refer to the sudden cessation of organized cardiac electrical activity with hemodynamic collapse, typically due to sustained ventricular tachycardia/ventricular fibrillation.**

- **These events generally occur in patients with a structural heart disease (that may not have been previously diagnosed), particularly coronary heart disease.**

- **The event is referred to as sudden cardiac arrest (or aborted sudden cardiac death) if an intervention (e.g. defibrillation, cardioversion, antiarrhythmic drug) or spontaneous reversion restores circulation.**

- **The event is called sudden cardiac death if the patient dies; however, the use of (sudden cardiac death) to describe both fatal and nonfatal cardiac arrest persists by convention.**

other structural cardiac disease, arrhythmias in the absence of structural heart disease and noncardiac causes responsible for the remaining deaths.

(64) (B) Usually there is evidence of myocardial ischemia.

- **Unstable angina belongs to the spectrum of clinical presentations referred to collectively as acute coronary syndromes, which range from ST-segment elevation myocardial infarction (STEMI) to non-ST elevation myocardial infarction (NSTEMI).**
- **Unstable angina is considered to be an acute coronary syndrome in which there is no detectable release of the enzymes and biomarkers of myocardial necrosis.**
- **The term angina is typically reserved for pain syndromes arising from presumed myocardial ischemia.**

(65) (B) 110-100 mmHg over 1-2 days.

- **Severe hypertension (systolic blood pressure ≥ 180 mmHg or diastolic blood pressure >120 mmHg), with no acute signs of end-organ damage, is often called hypertensive urgency.**
- **There is no proven benefit from rapid reduction of the blood pressure in patients with severe asymptomatic hypertension and myocardial or cerebral ischemia can be precipitated by overly rapid blood pressure lowering.**
- **The initial goal of reducing the blood pressure to $<160/100$ mmHg over several hours to days with conventional oral therapy.**
- **The optimal rapidity with which blood pressure is lowered is controversial and must take into consideration the individual patient's risk of an ischemic event.**

(66) (D) Exercise should be carried out daily to produce beneficial effects.

- **Aerobic training has beneficial effects on serum lipoprotein concentrations, body composition and aerobic capacity and improves hemostatic factors associated with thrombosis.**
- **The effect of aerobic training in serum lipoprotein is to lower serum levels of total cholesterol, LDL, VLDL and triglycerides and a higher concentration of HDL.**
- **The use of combined aerobic and resistance training to reduce the risk of cardiovascular disease development, as defined by a decrease in serum CRP concentration in healthy humans, is encouraged.**
- **Long-term exercise programs cause a greater decrease in abdominal fat than lower-body fat and help maintain these lower levels.**
- **Physical activity should be performed for approximately 30 minutes, 5-7 days/week, to prevent weight gain and to improve cardiovascular health.**
- **There appears to be a dose-dependent effect of physical activity on weight loss and substantially greater amounts of exercise are necessary to produce significant weight loss in the absence of a calorically-restricted diet.**

(67) (C) No needs to give prophylaxis.

- **Antibiotics are no longer recommended for endocarditis prophylaxis for patients undergoing genitourinary or gastrointestinal tract procedures.**
- **For high risk patients who undergo gastrointestinal or genitourinary procedures at a time of ongoing gastrointestinal or genitourinary infection, antibiotic coverage for enterococcal bacteremia should be provided with amoxicillin or ampicillin or, in the patient unable to tolerate these drugs, vancomycin.**

(68) (B) Acute mitral regurgitation.

- Severe mitral regurgitation can occur early in the course of ST elevation myocardial infarction (STEMI).
- Three mechanisms may be responsible for the mitral regurgitation and a transesophageal echocardiogram may be necessary to confirm the etiology:

1- Severe left ventricular dysfunction and dilatation, causing annular dilatation of the valve and subsequent regurgitation.

2- Myocardial infarction of the inferior wall, producing dysfunction of the papillary muscle that may normally respond to coronary intervention.

- The posteromedial papillary muscle is most frequently involved because of its single blood supply through the posterior descending coronary artery.
- Complete transection of the papillary muscles is rare and usually results in immediate pulmonary edema, cardiogenic shock and death.
- Patients with pulmonary edema most commonly complain of shortness of breath and profuse diaphoresis.

3- Myocardial infarction of the papillary muscles, producing sudden severe pulmonary edema and cardiogenic shock (intra-aortic balloon pump, coronary angiography and early surgery may improve patient survival rate).

The incidence of clinically evident systemic embolism after myocardial infarction is lower than 2%.

- This incidence increases in patients with anterior wall myocardial infarction.
- The overall incidence of mural thrombus after myocardial infarction is approximately 20%.

Large anterior myocardial infarction may be associated with mural thrombus in as many as 60% of patients.

- Most emboli arise from the left ventricle as a result of wall motion abnormalities or aneurysms.

Atrial fibrillation in the setting of ischemia may also contribute to systemic embolization.

The most common clinical manifestation of embolic complications is stroke, although patients may have ' ischemia, renal infarction, or intestinal ischemia.

- Most episodes of systemic emboli occur in the first 10 days after acute myocardial infarction.

(69) (B) Dobutamine.

- Dobutamine concentrate is indicated in adults who require inotropic support in the treatment of low output cardiac failure associated with myocardial infarction, open heart surgery, cardiomyopathies, septic shock or cardiogenic shock.

- Dobutamine concentrate can also increase or maintain cardiac output during positive end expiratory pressure ventilation.

Inotropic agents, including dobutamine, do not improve hemodynamics in most patients with a mechanical obstruction that hinders either ventricular filling or outflow, or both.

The inotropic response may be inadequate in patients with markedly reduced ventricular compliance: such conditions are present in cardiac tamponade, valvular aortic stenosis and idiopathic hypertrophic subaortic stenosis

(70) (A) Spironolactone.

- The optimal treatment of idiopathic adrenal hyperplasia consists of mineralocorticoid receptor blockade with spironolactone, or eplerenone for medical therapy of a unilateral adrenal adenoma.
- The goals of therapy are the same as for unilateral adenoma: normalization of the serum potassium level in hypokalemic patients, normalization of the blood pressure and reversal of the effects of hyperaldosteronism on the heart.
- The recommendation for patients with bilateral adrenal hyperplasia is treatment with drug therapy, not adrenalectomy.
- Blood pressure control is often inadequate with subtotal adrenalectomy and the risks associated with bilateral adrenalectomy (including the need for lifelong glucocorticoid and mineralocorticoid replacement) outweigh the potential benefits.

(71) (A) Propranolol.

- Blood pressure treatment appears to reduce the overall prevalence of headache in general.
- Beta-blockers, particularly metoprolol, propranolol and timolol, are effective for migraine prevention.
- Lower quality evidence suggests, but does not establish that calcium channel blockers, angiotensin converting enzyme inhibitors and angiotensin D receptor blockers are effective for migraine prevention.
- There are no clinical trial data for the use of thiazide diuretics in migraine prevention.

(72) (B) Aortic sclerosis.

- Aortic valve thickening (sclerosis) without stenosis is common in elderly adults.
- Aortic valve sclerosis is important clinically because it can progress to aortic stenosis and is a marker for increased risk of cardiovascular conditions.
- Aortic sclerosis is an asymptomatic condition that is generally detected either as a systolic ejection murmur on physical examination or as an incidental finding on ECG.
- Aortic sclerosis found on physical examination, in the absence of stenosis, may be associated with a mid-systolic ejection murmur, which is usually best heard over the right second interspace.
- In general, the murmur is brief and not very loud.
- A normal carotid pulse and normal heart sound S2 suggest the absence of aortic stenosis.

(73) (A) Left ventricular dilatation.

- The first symptoms of dilated cardiomyopathy are becoming short of breath during exertion and tiring easily.
- They result from a weakening of the heart's pumping action, which is called heart failure.
- Heart failure is a syndrome of ventricular dysfunction.
- Left ventricular failure causes shortness of breath and fatigue, orthopnea and paroxysmal nocturnal dyspnea.
- Right ventricular failure causes peripheral and abdominal fluid accumulation, ankle swelling and fatigue. Sometimes patients also feel a sensation of fullness in the abdomen or neck, hepatic congestion causing right upper quadrant abdominal discomfort and stomach and intestinal congestion causing anorexia and abdominal bloating.
- The ventricles can be involved together or separately.

(74) (D) No prophylaxis.

- Endocarditis prophylaxis is no longer recommended for patients with a prolapsed mitral valve.

although mitral valve prolapse is associated with an increased risk of endocarditis, there are no convincing data that antibiotic prophylaxis is effective in preventing episodes of endocarditis.

In active endocarditis can occur in spite of antibiotic prophylaxis and many cases of failure of prophylaxis have been reported with bacteria sensitive to the antibiotic given preventively.

Furthermore, transient everyday episodes of bacteremia account for a large proportion of cases of endocarditis.

(75) (B) Hypertension.

Hypertension, which promotes the formation of atherosclerotic lesions, is the single most important treatable risk factor for stroke.

Approximately 60% of strokes in men and women of all ages are attributed to hypertension, hypertension is associated with an increased likelihood of subclinical or silent stroke, which in turn has been linked with an elevated risk of vascular dementia and recurrent stroke, addition to mean blood pressure elevation, there is mounting evidence that visit-to-visit variability in systolic blood pressure is itself an independent risk factor for stroke.

(76) (A) Myocardial ischemia.

Episodes of transient ischemia during Holter monitoring are diagnosed by a sequence of ECG changes that include a flat or downward sloping ST depression of at least 1 mm, with a gradual onset and offset that lasts for at least one minute.

Although ST segment depression during Holter monitoring has not always been accepted as unequivocal evidence of myocardial ischemia, recent studies have shown an excellent correlation between ST depression recorded during Holter monitoring and other simultaneous objective evidence of ischemia such as perfusion scintigraphy, radionuclide cardioangiography and hemodynamic monitoring.

(77) (A) Exercise and weight reduction.

Initial treatment of hypertension should involve nonpharmacologic therapy (also called lifestyle modification) alone or in concert with anti-hypertensive drug therapy.

Weight loss in obese individuals can lead to a significant fall in blood pressure.

The decline in blood pressure induced by weight loss can occur in the absence of dietary sodium restriction, but even modest sodium restriction may produce an additive antihypertensive effect. Thus, an increase in physical activity should always be added to dietary changes in order to provide more sustained weight loss.

Regular aerobic exercise and resistance training are usually accompanied by a fall in blood pressure, which can be beneficial in the treatment of hypertension.

In addition, regular exercise can delay, if not stop, the development of hypertension.

All individuals should be advised to gradually increase their levels of physical activity.

(78) (C) Increase the intake of fruit and vegetables.

- Nutritional education should continue to promote the existing recommendations for a heart-healthy diet, which emphasize eating a variety of fruits and vegetables, increasing unsaturated fatty acid and fiber intake and reducing saturated fat intake.
- This type of dietary pattern has been shown to help prevent ischemic heart disease by favorably affecting several coronary risk factors.

(79) (A) Left heart failure.

- In heart failure due to left ventricle dysfunction, cardiac output decreases and pulmonary venous pressure increases.
- When pulmonary capillary pressure exceeds the oncotic pressure of plasma proteins (about 24 mmHg), fluid extravasates from the capillaries into the interstitial space and alveoli, reducing pulmonary compliance and increasing the effort of breathing.
- Possible symptoms: exertional dyspnea, which precedes orthopnea and paroxysmal nocturnal dyspnea, fatigue and symptoms secondary to pulmonary edema, including cough (sometimes with pink froth), hemoptysis and wheeze (cardiac asthma).
- Most common signs: tachycardia, basal crackles (the worse the heart failure the more widespread the crackles) and a gallop heart rhythm (a 3rd heart sound and/or a 4th heart sound).

(80) (A) Digitalis toxicity.

- Clinical digoxin toxicity represents a complex interaction between digoxin and various electrolyte and renal abnormalities.
- A patient with normal digoxin levels (0.5-2 ng/ml) but renal insufficiency or severe hypokalemia may have more serious cardiotoxicity than a patient with high digoxin levels and no renal or electrolyte disturbances.
- The most common precipitating cause of digitalis intoxication is depletion of potassium stores, which often occurs in patients with heart failure as a result of diuretic therapy and secondary hyperaldosteronism.
- Visual aberration often is an early indication of digitalis toxicity.
- Yellow-green distortion is most common, but red, brown, blue and white distortion also occurs.
- Drug intoxication also may cause snowy vision, photophobia, photopsia, decreased visual acuity, yellow halos around lights (xanthopsia) and transient amblyopia or scotomata.

(81) (B) Atrial septal defect.

- Bacterial endocarditis can occur with many heart defects but is most common in aortic valve lesions, patent ductus arteriosus (unrepaired). Tetralogy of Fallot, ventricular septal defects, coarctation of the aorta and mitral valve prolapse with mitral regurgitation.
- Endocarditis rarely occurs in isolated secundum atrial septal defects or pulmonic stenosis.
- Endocarditis may occur in most congenital heart lesions after surgical repair with the exception of completely repaired ventricular septal defects and patent ductus arteriosus 6 months after the surgery.

(82) (B) It should be treated seriously as it might lead to myocardial infarction.

Unstable angina and acute non-ST elevation myocardial infarction (NSTEMI) are medical emergencies requiring the simultaneous application of multiple therapies.

- After the emergent period, other therapies may need to be started.

Treatment is designed to relieve distress, interrupt thrombosis, reverse ischemia, limit infarct size, reduce cardiac workload and prevent and treat complications.

- Acute coronary syndrome is a medical emergency; its outcome is greatly influenced by rapid diagnosis and treatment.
- 50% of people with unstable angina have evidence of myocardial necrosis based on elevated cardiac serum markers such as creatine phosphokinase-MB and troponin T or I and thus have a diagnosis of non-ST elevation myocardial infarction.

(83) (B) Remove the metformin.

- Biguanide therapy with metformin in patients with diabetes mellitus type 2 can lead to lactic acidosis.

Despite its rarity, lactic acidosis related to metformin use remains a concern because of the high fatality rate of the condition.

- Most cases have occurred in patients with shock, tissue hypoxia, or in the presence of several other predisposing conditions: all are relative or absolute contraindications to metformin therapy.
- Of these factors, impaired renal function is of greatest concern and heart failure the least worrisome.
- Symptoms of lactic acidosis are nonspecific and may include anorexia, nausea, vomiting, abdominal pain, lethargy, hyperventilation and hypotension.
- More serious lactic acid accumulation occurs with superimposed shock or in the presence of conditions that predispose metformin toxicity.

(84) (A) Increased HDL serum level.

- HDL is positively associated with a decreased risk of coronary heart disease.
- An HDL of 60 mg/dl or greater is a negative (protective) risk factor.
- On the other hand, a high-risk HDL level is described as one that is below 40 mg/dl.
- Randomized, controlled clinical trials have demonstrated that interventions to raise HDL levels are associated with reduced coronary heart disease events.

(85) (A) Decreased oxygen supply to the heart

- Premature ventricular contractions may be associated with stress, fatigue, excess caffeine, alcohol or nicotine consumption, lack of oxygen to tissues or organs (ischemia), low blood oxygen levels (hypoxia), electrolyte imbalance, or, in particular, low potassium levels in the blood (hypokalemia).
- Both prescription and illicit drugs may be associated with premature ventricular contraction.
- The arrhythmia may also be a symptom of a heart attack or other cardiac disease.

(86) (A) Creatine phosphokinase.

- Elevations in total serum creatine phosphokinase lack specificity for cardiac damage, but can be approved with measurement of the MB fraction
- The normal creatine phosphokinase level range varies considerably; a two fold or greater increase in the creatine phosphokinase concentration is required for a positive myocardial infarction diagnosis.
- When cardiac troponin data are available, creatine phosphokinase-MB should not be used for the diagnosis of acute myocardial infarction.
- Assays to determine creatine phosphokinase-MB level can be performed easily and rapidly.
- Since creatine phosphokinase levels return to baseline 36-48 hours after infarction, resampling can be used to detect reinfarction and because cardiac troponin does not normalize as rapidly, it was initially suggested that monitoring creatine phosphokinase-MB might be of value in this area.
- It is now clear that cardiac troponin increases rapidly, albeit from an abnormal baseline in patients with reinfarction.
- Therefore, the use of cardiac troponin monitoring has been recommended for all acute myocardial infarction diagnosis, including reinfarction.

(87) (D) Stable angina is associated with loss of consciousness.

- Stable angina pectoris, or stable angina, refers to chest discomfort that occurs predictably and reproducibly at a certain level of exertion, usually persists no more than a few minutes and is relieved with rest or nitroglycerin.
- Most patients with ischemic heart disease will experience angina as part of the clinical manifestations of the disease.
- Symptoms are exaggerated when exertion follows a meal or occurs in cold weather; for example walking into the wind or first contact with cold air after leaving a warm room may precipitate an attack.
- Symptom severity is often classified by the degree of exertion resulting in angina.

(88) (B) Unstable angina appears to be independent of activity level but stable is not.

- Unstable angina differs from stable angina in that the discomfort is usually more intense and easily provoked and ST-segment depression or elevation may be seen on an ECG.
- Otherwise, the manifestations of unstable angina are similar to those of other conditions of myocardial ischemia, such as chronic stable angina and myocardial infarction.
- Symptoms that occur at rest and suddenly become more frequent, severe, or prolonged are a change from the usual pattern of angina and usually do not respond to rest or nitroglycerin.

(89) (D) Seizure.

- Severe hypokalemia is defined as a level less than 2.5 mEq/L
- Severe hypokalemia is not linked with any specific symptoms, but may cause:
 - 1- Muscle myalgia or muscle pain.
 - 2- Disturbed heart rhythm including ectopy (disturbance of the electrical conduction system of the heart where beats arise from the wrong part of the heart muscle).
 - 3- Serious arrhythmias (electrical activity faster or slower than normal).
 - 4- Greater risk of hyponatremia (an electrolyte disturbance in humans when the sodium concentration in the plasma decreases below 135 mmol/L) with confusion and seizures.

ECG changes in hypokalemia:

- 1 T-wave flattening.**
- 2- U-wave: (additional wave after the T wave).**
- 3- ST segment depression.**

ECG changes in hyperkalemia:

- 1- Peak T wave.**
- 2 Wide QRS complex (in severe case).**
- 3- Prolonged PR interval (in severe case).**
- 4- Loss of P wave.**

(90) (D) Respiratory acidosis.

Hypokalemia is frequently encountered in clinical medicine and has been estimated to occur in approximately 20% of patients admitted to general internal medicine services.

- Symptoms may be absent, identified only on routine electrolyte screening, or may range from neuromuscular weakness, rarely progressing to frank paralysis or sudden cardiac death.

Usually, correction of hypokalemia is not difficult, but if therapy is not appropriate, symptoms may worsen with potentially severe, even lethal, consequences.

Hypokalemia can profoundly affect systemic acid-base homeostasis through its effects on multiple components of renal acid-base regulation.

- The most common abnormality is metabolic alkalosis.

In rare cases, severe hypokalemia leads to respiratory muscle weakness and the development of respiratory acidosis.

- In patients with hypokalemia as a result of renal tubular acidosis, the concomitant development of respiratory acidosis can be life-threatening.

Hypokalemia produces characteristic changes in ECG readings, although these changes are not seen in all patients.

There is depression of the ST segment, a decrease in the amplitude of the T wave and an increase in the amplitude of U waves, which occur at the end of the T wave (waveform 1).

U waves are often seen in the lateral precordial leads V4-V6.

Hypokalemia also prolongs the QT interval.

(91) (B) 50%.

An individual who has had a previous attack of rheumatic fever and in whom group A beta-hemolytic streptococcus pharyngitis develops, is at high risk of a recurrent attack of rheumatic fever.

- A recurrent attack can be associated with worsening of the severity of any rheumatic heart disease that developed after a first attack, or less frequently with the new onset of rheumatic heart disease in individuals who did not develop cardiac manifestations during the first attack.

Prevention of recurrent episodes of group A beta-hemolytic streptococcus pharyngitis is the most effective method of preventing the development of severe rheumatic heart disease.

The proportion of patients with a primary episode of acute rheumatic fever that have recurrent attacks varies depending upon compliance with secondary prophylaxis; in areas where compliance is poor, up to 45% of cases of rheumatic fever are recurrent episodes.

(92) (B) Low voltage.

- This is a case of pericardial effusion.
- ECG findings suggestive of pericardial effusion are low QRS voltage and electrical alternans.
- Low voltage is usually defined as a QRS complex <5 mm (0.5 mV) in all of the limb leads.
- This may or may not be accompanied by low voltage in the precordial leads, defined as total QRS amplitude of <10 mm in V1-V6.
- It has been suggested that low QRS voltage may be a manifestation of cardiac tamponade and pericardial inflammation, rather than pericardial effusion alone.
- ECG changes during pericarditis include: diffuse ST elevation, PR depression followed by T-wave inversion and low voltage.

(93) (A) Aspirin daily.

- The low prevalence of asymptomatic carotid stenosis, low risk of stroke in patients with asymptomatic carotid stenosis and the variability of surgical outcomes dependent upon surgeon and center, are factors that influence recommendations for population screening for carotid stenosis.
- Patients with evidence of carotid artery atherosclerosis benefit from risk factor intervention, including management of hypertension, smoking cessation and the use of statin drugs.
- Low-dose aspirin therapy may be beneficial for high-risk individuals.
- It is reasonable to perform carotid endarterectomy in asymptomatic patients who have more than 70% stenosis of the internal carotid artery if the risk of perioperative stroke, myocardial infarction and death during the procedure is low.

(94) (A) Constrictive pericarditis.

- Patients with constrictive pericarditis typically present with one or both of the following constellations of symptoms:
- Symptoms related to fluid overload, ranging from peripheral edema to anasarca.
- Symptoms related to diminished cardiac output in response to exertion, such as fatigability and dyspnea on exertion.
- The vast majority of patients with constrictive pericarditis display elevated jugular venous pressure on physical examination.
- Other important but less common features observed during physical examination include pulsus paradoxus, Kussmaul's sign, a pericardial knock, edema, ascites and/or cachexia.

(95) (A) Red meat.

- A diet low in fats and cholesterol can lower the LDL cholesterol level.
- Experts recommend limiting calories from fat to no more than 25-35% of the total calories consumed over several days.
- The type of fat consumed is also important.
Fats may be saturated, polyunsaturated or monounsaturated.
Saturated fats increase cholesterol levels more than the forms of at
- Saturated fats should provide no more than 7-10% of total calories consumed each day.
- Polyunsaturated fats and monounsaturated fats may help decrease levels of triglycerides and LDL cholesterol in the blood
- Large amounts of saturated fats occur in meats egg yolk full-fat dairy products some nuts (such as macadamia nuts) and coconut.

vegetable oils contain smaller amounts of saturated fat, but only some vegetable oils are truly low in saturated fats.

Eating lots of fruits, vegetables and grains, which are naturally low in fat and contain no cholesterol, is recommended.

Also recommended are foods rich in soluble fiber, which binds fats in the intestine and helps lower the cholesterol level in blood. Such foods include oat bran, oatmeal, beans, peas, rice bran, barley, citrus fruits, strawberries and apple pulp.

(96) (A) Amiodarone should be included in the management.

Amiodarone has emerged as the leading antiarrhythmic therapy for the termination and prevention of ventricular arrhythmia in different clinical settings because of its proven efficacy and safety. In patients with shock-refractory out-of-hospital cardiac arrest and hemodynamically destabilizing ventricular arrhythmia, amiodarone is the most effective drug available to assist in resuscitation though the superiority of the transvenous implantable cardioverter defibrillator over amiodarone has been well established. In the preventive treatment of patients at high risk of life-threatening ventricular arrhythmias amiodarone (if used with beta-blockers) is the most effective antiarrhythmic in preventing implantable cardioverter defibrillator shocks and treating electrical storm. The pharmacokinetics and electrophysiologic profile of amiodarone are complex and its optimal and safe use requires careful patient surveillance with respect to potential adverse effects.

(97) (D) An echocardiogram should be carried out.

Infective endocarditis is a potential complication of mitral valve prolapse.

Patients with mitral valve prolapse syndrome whom we have murmurs and/or thickened redundant leaflets on echocardiogram should receive antibiotic prophylaxis against endocarditis.

(98) (A) Angiotensin converting enzyme inhibitors.

Angiotensin converting enzyme inhibitors prevent or delay microvascular and macrovascular complications of diabetes and are recommended as first-line antihypertensive agents in patients with diabetes. Angiotensin converting enzyme inhibitors delay the progression of diabetic kidney disease and are effective with other medications in delaying the onset of kidney failure in patients who have hypertension and diabetes mellitus type 1 with macroalbuminuria.

(99) (C) Nifedipine.

Long-term vasodilation therapy with nifedipine reduces or delays the need for aortic-valve replacement in patients with severe aortic regurgitation and normal left ventricular systolic function. In a long-term study, patients with severe aortic regurgitation who underwent replacement were no more likely to be treated with nifedipine compared to those treated with digoxin. Results determined by actuarial analysis of valve replacement were equivalent significantly less in patients treated with nifedipine. In a study, patients undergoing aortic valve replacement independent of which drug was used had a fall in left ventricular ejection fraction from 62% at baseline to 46% before surgery.

(100) (B) Asphyxia.

- Ludwig's angina is a bilateral infection of the submandibular space that begins in the floor of the mouth, most commonly related to the second or third mandibular molar teeth.

It is an aggressive, rapidly spreading (woody) or brawny cellulitis without lymphadenopathy.

- Airway compromise is a potential complication and requires careful monitoring and rapid intervention to prevent asphyxia and aspiration pneumonia.

- Various aerobic and anaerobic microorganisms and less often fungi, have been implicated in the etiology of Ludwig's angina, including oral flora such as streptococci and staphylococci.

- Early recognition and the use of parenteral antibiotics can prevent mortality and morbidity.

- Ludwig's angina is a progressive cellulitis that often results in death by asphyxia.

Ludwig's angina can be complicated by subsequent deep neck infection.

(101) (C) Renal disease.

- Secondary hypertension is potentially curable because it is most commonly caused by the stenosis (narrowing) of the renal arteries.

- Less often, secondary hypertension can be caused by tumors of the adrenal gland that secrete hormones acting to increase the blood pressure.

- Renal parenchymal disease is the most common cause of secondary hypertension.

- Hypertension associated with renal parenchymal disease occurs as a complication of a wide variety of glomerular and interstitial renal diseases and may accelerate the decline in renal function if inadequately controlled.

- Renal parenchymal hypertension probably represents the combined interactions of multiple independent mechanisms: potential factors include impaired sodium handling leading to volume expansion, perturbations of the renin-angiotensin system alterations in endogenous vasodepressor compounds and the increased activity of vasoactive substances.

(102) (A) ST changes.

- Chest pain is the cardinal symptom of pericarditis. It is usually precordial or retrosternal with referral to the trapezius ridge, neck, left shoulder, or arm.

- The quality of the pain is usually pleuritic, but it ranges from sharp to dull, aching, burning, or pressing and the intensity varies from barely perceptible to severe.

- The pain is worse during inspiration, when lying flat, during swallowing, or with body motion and it may be relieved by leaning forward while seated.

The typical progression of ECG changes in patients with acute pericarditis is:

Stage 1 is seen in the first hours to 4 days and is characterized by diffuse ST elevation with reciprocal ST depression in leads aVR and VI (waveform 1). There is also an atrial current of injury, reflected by elevation of the PR segment in lead aVR and depression of the PR segment in other limb leads and in the left chest leads; primarily V5 and V6.

Stage 2 is typically seen from day 5 and is characterized by normalization of the ST and PR segments.

Stage 3 is characterized by the development of diffuse T wave inversions, generally after the ST segments have become isoelectric.

- Stage 4 is represented by the normalization of the ECG or indefinite persistence of T wave inversions (chronic pericarditis).

(103) (A) Hydrochlorothiazide.

The special advantage of using diuretics includes a reduction in the edema and expanded plasma volume that are often associated with hypertension and cardiovascular disease.

Diuretics are one of the 5 major classes of antihypertensive agents recommended for the initial drug therapy of hypertension.

However, treatment of hypertension with diuretics is currently controversial, because of their potentially adverse effects on the cardiovascular risk profile, including deterioration in glucose control, especially in patients with impaired glucose tolerance.

Additionally there is concern about the high rate of mortality associated with diuretic therapy and diabetes mellitus.

- The metabolic side effects on glucose metabolism and lipid profile are related to the type of diuretic and its dosage.

The adverse effects of thiazides on insulin action, glycemia and lipid profile are dose dependent and can be minimized by using low doses.

In contrast, indapamide does not seem to alter glucose metabolism or lipid profile.

The choice of diuretic depends on concomitant diseases.

(104) (B) Angiotensin converting enzyme inhibitors.

- Angiotensin converting enzyme inhibitors therapy leads to symptomatic improvement, reduced hospitalization and enhanced survival in patients with heart failure and systolic dysfunction.

Therefore, angiotensin converting enzyme inhibitors are an important component of standard heart failure therapy in patients with current or prior symptoms of heart failure and depressed left ventricular systolic function.

Angiotensin converting enzyme inhibitors inhibit aldosterone which, if present in high concentrations, causes modification of the cardiac myocytes in the long term.

(105) (A) Bacterial endocarditis.

Infective endocarditis is an infection of the endocardium, usually with bacteria (commonly, streptococci and staphylococci) or fungi.

- It causes fever, heart murmurs, petechiae, anemia, embolic phenomena and endocardial vegetations.

Vegetations may result in valvular incompetence or obstruction, myocardial abscess, or mycotic aneurysm. Endocarditis can occur at any age.

- Men are affected about twice as often.

- IV drug abusers and immunocompromised patients are at highest risk.

Specific drugs of abuse may also be risk factors for the development of endocarditis, which often involves the right side of the heart.

- The pathogenic mechanisms accounting for an apparent association between injection drug use and right-sided endocarditis remain to be elucidated.

- Diagnosis requires demonstration of microorganisms in blood and usually echocardiography.

- Treatment consists of prolonged antimicrobial treatment and sometimes surgery.

(106) (E) It is more dangerous in elderly patients than an elevated diastolic pressure.

- **Systolic hypertension is a major health and economic problem within our aging society.**
- **Increased arterial stiffness, especially of the large arteries, is the vascular phenotype of systolic hypertension.**
- **Elevated systolic blood pressure has a greater association with cardiovascular morbidity and mortality than diastolic blood pressure.**
- **The treatment of systolic hypertension in the elderly should be based on non-pharmacological measures and medical therapy if the systolic hypertension cannot be controlled by conservative therapy alone.**
- **In the very elderly, lowering blood pressure to a level of 150/80 mmHg is still very beneficial.**
- **Antihypertensive therapy needs to be tailored in the elderly because of comorbid conditions, such as ischemic heart disease, heart failure, atrial fibrillation, renal insufficiency and diabetes.**
- **Angiotensin converting enzyme inhibitors or angiotensin II receptor blockers should be considered in combination with diuretics or with a dihydropyridine calcium antagonist.**
- **Beta-blockers seem to be less effective for cardiovascular disease protection in comparison with other antihypertensive drug classes, such as diuretics, dihydropyridines, angiotensin converting enzyme inhibitors or angiotensin II receptor blockers.**
- **A major effort is required to reduce the therapeutic inertia and increase therapeutic adherence for better blood pressure control in the elderly with systolic hypertension.**

(107) (E) A Q wave should be observed in the ECG reading.

- **When myocardial blood supply to a region of the heart is abruptly reduced or cut off, a sequence of injurious events occur, beginning with subendocardial or transmural ischemia, followed by necrosis and eventual fibrosis (scarring), if the blood supply is not restored in an appropriate period of time.**
- **Rupture of an atherosclerotic plaque followed by acute coronary thrombosis is the most common mechanism of acute myocardial infarction.**
- **The ECG changes reflecting this sequence usually follow a well-known pattern depending on the location and size of the myocardial infarction.**
- **Myocardial infarction resulting from total coronary occlusion results in more homogeneous tissue damage and is usually reflected by a Q-wave myocardial infarction pattern on the ECG.**
- **Myocardial infarction resulting from subtotal occlusion lead to more heterogeneous damage, which may be evidenced by a non Q-wave myocardial infarction pattern on the ECG.**
- **A 2/3 of myocardial infarction presentations to ER evolve to non-Q wave myocardial infarctions; most having ST segment depression or T wave inversion.**

(108) (B) Epinephrine.

- **In pediatrics resuscitation: patients in asystole or with pulseless electrical activity should receive CPR and epinephrine (IV / intraosseous administration is preferred over endotracheal administration).**
- **The administration of epinephrine is the intervention most likely to be of benefit when basic life support and volume resuscitation do not restore effective circulation.**
- **Atropine is no longer routinely recommended in patients with cardiac arrest and is primarily indicated for vasovagal induced bradycardia or the treatment of primary atrioventricular block.**
- **For adults in asystole the only 3 drugs recommended are epinephrine, vasopressin and atropine.**
- **In spite of full vagolytic doses of atropine (0.03 mg/kg) and high-dose epinephrine (0.20 mg/kg), or the use of vasopressin 40 units, few patients survive to leave the hospital neurologically intact.**

(109) (A) ST segment elevation in all leads.

acute pericarditis, the ECG typically shows ST segment elevation in all leads with an upward concavity of the elevation (so called smiling face), the PR segment is depressed

Like myocardial infarction, there is no reciprocal change and T waves are not inverted, the pattern of ST segment elevation is important in the diagnosis of acute pericarditis. The ST segment elevation that occurs during acute pericarditis is usually concave compared with the appearance of the ST segment that occurs during the acute injury stage of a myocardial infarction. Another important feature of acute pericarditis is the widespread ST-segment elevation not responding to any specific arterial territory, which usually occurs in association with acute myocardial infarction.

In addition, reciprocal changes are absent in acute pericarditis, although they are frequently found in acute myocardial infarction.

(110) (D) A patient who has undergone cardiac catheterization.

almost all patients who receive an intracoronary stent, the combination of aspirin and a second platelet agent, referred to as dual antiplatelet therapy is used for a period of time after stenting, while the optimal duration of dual antiplatelet therapy after stenting is not known, most of the evidence suggests that 12 months is a reasonable goal.

Dual antiplatelet therapy is typically the combination of aspirin plus dipyridol, ticlopidine, prasugrel, ticagrelor, all of which are referred to as platelet P2Y₁₂ receptor blockers

The risk of coronary artery stent thrombosis and its consequences of myocardial infarction or death are diminished by the use of dual antiplatelet therapy with aspirin and a platelet P2Y₁₂ receptor blockers compared to the use of aspirin alone

(111) (B) Stop the warfarin treatment and repeat INR next day.

- INR between 2.0 and 3.0 is recommended for most patients with nonvalvular atrial fibrillation who receive warfarin.

This is based on the increased risk of stroke observed with INR values significantly lower than 2.0 and the increased risk of bleeding associated with higher intensities of anticoagulation.

Recommended management of a supra-therapeutic INR		
INR	Bleeding	Recommended action
> Therapeutic	No	<ul style="list-style-type: none"> - Lower warfarin dose, or - Omit one dose of warfarin and resume therapy at a lower dose when INR is within the therapeutic range, or - No dose reduction needed if INR is minimally prolonged. - Omit the next 1-2 doses of warfarin, monitor INR more frequently and resume treatment at a lower dose when INR is within the therapeutic range, or
	No	<ul style="list-style-type: none"> - Omit one dose of warfarin and administer 1 - 2.5 mg oral vitamin K.
> 5.0 - 9.0	No	<ul style="list-style-type: none"> - Stop warfarin administration and administer 2.5 - 5 mg oral vitamin K. - Monitor INR more frequently and administer more vitamin K as needed. - Resume warfarin treatment at a lower dose when INR is within the therapeutic range.
> 9.0	No	<ul style="list-style-type: none"> - Stop warfarin administration and administer 10 mg vitamin K by slow IV infusion; supplement with four-factor prothrombin complex concentrate or fresh frozen plasma, depending on clinical urgency. Monitor and repeat as needed.
Any	Serious or life-threatening	

(112) (C) Leaking aortic aneurysm.

- Abdominal aortic aneurysms are relatively common and are potentially life threatening.
- Individuals at greatest risk of abdominal aortic aneurysms are men older than 65-year-old who have peripheral atherosclerotic vascular disease.
- Aneurysms are usually asymptomatic but can cause pain and lead to ischemia, thromboembolism, spontaneous dissection and rupture, which may be fatal.
- Syncope may be the chief complaint, however, with pain less prominent.
- If an abdominal aortic aneurysm ruptures, patients who do not die immediately typically present with abdominal or back pain, hypotension and tachycardia.
- They may have a history of recent, often minimal, upper abdominal trauma or isometric straining.

(113) (B) Abdominal CT.

- For symptomatic patients suspected of having abdominal aortic aneurysm who are hemodynamically stable, an urgent abdominal CT scan is recommended rather than a US.
- An abdominal CT scan has the advantage of evaluating the abdomen in more detail, which is necessary for differentiating ruptured from nonruptured aneurysm.
- CT scans are better than US for evaluating suprarenal aneurysms.
- Abdominal CT scans also readily identify other abdominal pathologies as potential causes of symptoms.
- Abdominal CT scans define the extent of the aneurysm, providing important anatomical information by which to plan urgent abdominal aortic aneurysm repair and determines whether the aneurysm is suited to endovascular aneurysm repair.

(114) (A) A wide S wave in lead I and V6 and a wide R wave in VI.

- A small R wave in lead I and aVL, a small Q wave in leads II, III and aVF and right axis deviation are criteria used to diagnose left posterior fascicular block.

(115) (A) Non-selective beta-blockers.

- Bronchoconstriction can occur when non-selective beta-blockers are administered to asthmatic patients.
- Therefore, non-selective beta-blockers are contraindicated in patients with bronchial asthma or chronic obstructive pulmonary disease.

(116) (A) Spontaneous pneumothorax.

- A primary spontaneous pneumothorax tends to occur in a young adult without underlying lung problems and usually causes limited symptoms.
- Chest pain and sometimes mild breathlessness are the usual predominant presenting features.
- It is rare for spontaneous pneumothorax to cause tension pneumothorax.

(117) (A) Wash clothes with hot water.

- Dust mite debris is the major source of allergens in house dust.
- These microscopic arthropods primarily feed on human skin scales.
- They lack an organized respiratory system, their water supply is derived from the ambient air and acaricides are not effective to control their presence and numbers.
- Seasonal changes in relative humidity can affect the concentrations of dust mite allergens and these fluctuations can contribute to allergic symptoms in the sensitized individual.
- Washing linens in hot water (55°C) at least once/week is recommended to kill the mites and remove most of the associated allergens.

(118) (B) The long arm of chromosome 7.

cystic fibrosis is an autosomal-recessive disorder caused by mutations in the cystic fibrosis transmembrane conductance regulator gene (chloride channel) on the long arm of chromosome 7 and is characterized by widespread exocrine gland dysfunction

(119) (B) Lung damage.

Patients with acute respiratory distress syndrome often require high-intensity mechanical ventilation, including high levels of positive end expiratory pressure or continuous positive airway pressure and, possibly, high mean airway pressures; thus, barotrauma may occur. Patients present with pneumomediastinum, pneumothorax, or both.

Pneumothorax is a frequent and potentially fatal complication of mechanical ventilation in patients with acute respiratory distress syndrome.

Lung damage (such as pneumothorax) can occur due to injury from the breathing machine needed to treat acute respiratory distress syndrome.

Other potential complications that may occur in these mechanically ventilated patients include accidental extubation and right mainstem intubation.

(120) (E) Both B and C.

Generally, the right middle and lower lung lobes are the most common sites of infiltrate formation due to the larger caliber and more vertical orientation of the right mainstem bronchus. Patients who aspirate while standing can have bilateral lower lung lobe infiltrates. The right upper lobe is a common area of consolidation in alcoholics who aspirate in the prone position.

(121) (B) Pulmonary angiography.

The gold standard for the diagnosis of pulmonary embolus is a pulmonary angiogram in which a catheter threaded into the pulmonary arteries, usually from veins in the leg.

Dye is injected and a clot or clots can be identified on imaging studies.

- This is considered an invasive test and is rarely performed due to the wider acceptance of CT scans, which are non-invasive

pulmonary angiography is the recommended first line diagnostic imaging test in most people.

(122) (D) It has 2 pulmonary veins.

There are 2 complete fissures in the right lung and 1 complete fissure and 1 incomplete fissure in the left lung.

The right lung comprises 10 segments while the left comprises 8 segments. There are 2 pulmonary veins, superior and inferior, that are formed on each lung. These 4 veins typically join it or near their junction with the left atrium and usually this common area is pericardially attached over the right main bronchus posteriorly at the root of the right lung to join the inferior vena cava.

The arch of the azygos vein is an important anatomical landmark

(123) (A) Bronchiectasis.

- Patients with mild bronchiectasis only produce yellow or green sputum after an infection.
- Localized areas of the lung may be particularly affected; in which case sputum production will depend on position
- As the condition worsens, the patient suffers from persistent halitosis, recurrent febrile episodes with malaise and episodes of pneumonia.
- Clubbing occurs and coarse crackles can be heard over the infected areas; usually the bases of the lungs.
- When the condition is severe there is a continuous production of foul-smelling, thick, khaki-colored sputum.
- Hemoptysis can occur either as bloodstained sputum or as a massive hemorrhage.
- Breathlessness may result from airflow limitation.

(124) (C) Mitral regurgitation.

- Acute mitral regurgitation occurs in association with coronary artery disease and acute myocardial infarction (typically, inferior myocardial infarction, which may lead to papillary muscle dysfunction).
- Significant acute mitral regurgitation is accompanied by symptoms of impaired left ventricular function, such as dyspnea, fatigue and orthopnea.
- In these cases, pulmonary edema is often the initial manifestation because of the rapid volume overload on the left atrium and the pulmonary venous system.

(125) (B) Urinary tract infection.

- The most common type of infection caused by enterococci is usually nosocomial (associated with urinary tract catheterization or instrumentation).
- Sources of enterococcal bacteremia include the urinary tract, intra-abdominal foci, wounds and intravascular catheters, especially catheters in femoral locations.

(126) (A) Corticosteroid inhaler.

(127) (A) Short acting beta-agonist inhaler.

- Bronchial asthma is a common chronic inflammatory condition of the lung airways.
- Symptoms include a cough, wheezing, chest tightness and shortness of breath that is often worse at night.
- Mild asthmatics with intermittent attacks have a condition known as intermittent bronchial asthma and a controller medication is not indicated.
- The reliever medication for these patients is a short-acting beta-agonist as needed for symptoms.
- Short-acting beta-agonists, such as salbutamol or terbutaline, should be prescribed as 2 puffs as required.

(128) (B) Mild persistent.

- Treatment of bronchial asthma:

1- Step 1 - Intermittent bronchial asthma:

- A controller medication is not indicated.
- The reliever medication is a short-acting beta-agonist as needed for symptoms.

2- Step 2 • Mild persistent bronchial asthma:

- The preferred controller medication is a low-dose inhaled corticosteroid.

- Alternatives include sodium cromolyn, nedocromil, or a leukotriene receptor antagonist.

3- Step 3 - Moderate persistent bronchial asthma:

- The preferred controller medication is either a low-dose inhaled corticosteroid plus a long-acting beta-agonist (combination medication is the preferred choice to improve compliance), or an inhaled medium-dose corticosteroid.
- Alternatives include a low-dose inhaled corticosteroid plus either a leukotriene receptor antagonist, such as theophylline, or zileuton.

4- Step 4 - Moderate-to-severe persistent bronchial asthma:

- The preferred controller medication is an inhaled medium-dose corticosteroid plus a leukotriene receptor antagonist (combination therapy).
- Alternatives include an inhaled medium-dose corticosteroid plus either a leukotriene receptor antagonist, such as theophylline, or zileuton.

5- Step 5 - Severe persistent bronchial asthma:

- The preferred controller medication is an inhaled high-dose corticosteroid plus a leukotriene receptor antagonist.
- Omalizumab should be considered for patients who have allergies.

6- Step 6 Severe persistent bronchial asthma:

- The preferred controller medication is a high-dose inhaled corticosteroid plus a leukotriene receptor antagonist and an oral corticosteroid.
- Omalizumab should be considered for patients who have allergies.

(129) (A) Restrictive lung disease.

- In restrictive lung disease, both FEV1 and FVC are reduced, however, the decline in FVC is greater than that of FEV1; resulting in a FEV1/FVC ratio of higher than 80%.
- In obstructive lung disease, however, FEV1 is reduced while FVC remains stable; consequentially depicting a lower FEV1/FVC ratio.

(130) (E) Haemophilus Influenzae.

- After Streptococcus pneumoniae, non-typeable haemophilus influenzae is the most common cause in adults.
- It is common in patients with chronic obstructive pulmonary disease and AIDS and exacerbates chronic obstructive pulmonary disease, the symptoms of which include low-grade fever, increased cough and purulent sputum production and dyspnea.
- Non-typeable haemophilus influenzae invasive diseases are frequently associated with underlying medical conditions, including prematurity, advanced age, alcoholism, malignancy, cystic fibrosis, bronchial asthma, CSF leak, central nervous system shunts, congenital heart disease and immunoglobulin deficiency.
- People with chronic obstructive pulmonary disease have diseased airways, which impairs the normal protective responses.
- Thus Haemophilus influenzae is present in the lower airways of people with chronic obstructive pulmonary disease.
- It is also the most important bacterial cause of the exacerbation of chronic obstructive pulmonary disease symptoms and can lead to serious complications.

(131) (A) Heparin IV.

- Heparin augments the activity of antithrombin m and prevents the conversion of fibrinogen to fibrin.
- Full-dose low molecular weight heparin or full-dose unfractionated IV heparin should be initiated at the first suspicion of DVT or pulmonary embolism.

(132) (B) Pulmonary embolism.

- The most common ECG abnormalities in the setting of pulmonary embolism are tachycardia and nonspecific ST-T wave abnormalities.
- The classic findings of right heart strain and acute cor pulmonale are tall, peaked P waves in lead II (P pulmonale); right axis deviation; right bundle-branch block; and SI Q3 T3 pattern or atrial fibrillation.
- Unfortunately, only 20% of patients with proven pulmonary embolism have any of these classic electrocardiographic abnormalities.
- If electrocardiographic abnormalities are present, they may be suggestive of pulmonary embolism, but the absence of such abnormalities has no significant predictive value.

(133) (A) Streptomycin.

- Streptomycin is an antibiotic (antimycobacterial) drug, the first of a class of drugs called aminoglycoside to be discovered and it was the first antibiotic remedy for TB.
- Fever and rashes often result from persistent use of this drug.
- The vestibular portion of cranial nerve VIII (the vestibulocochlear nerve) can be affected, resulting in tinnitus, vertigo and ataxia.
- Other adverse effects of this medicine are ototoxicity, nephrotoxicity, fetal auditory toxicity and neuromuscular paralysis.

(134) (A) TB.

- TB a multisystemic disease with myriad presentations and manifestations, is the most common cause of infectious disease-related mortality worldwide.
- The classic clinical features associated with active pulmonary TB are cough, weight loss/anorexia, fever, night sweats, hemoptysis, chest pain and fatigue.
- Chest pain in patients with TB can also result from tuberculous.
- Pericardial TB can lead to cardiac tamponade or constriction.
- Chest radiographs may show a patchy or nodular infiltrate.
- TB may be found in any part of the lung, but upper lobe involvement is most common.
- The lordotic view may better demonstrate apical abnormalities.

(135) (C) Multiple lung nodules.

- Multiple fine nodular densities distributed throughout both lungs that represent hematologic or lymphatic dissemination are typical of miliary TB.

(136) (B) Streptococcus pneumonia.

- Pneumonia is defined as an inflammation of the lung tissue.
- It is usually caused by bacteria.
- Clinically it usually presents as an acute illness with cough, purulent sputum and fever together with physical signs or radiological changes compatible with consolidation of the lung.
- The clinical presentation varies according to the immune state of the patient and the infecting agent.

he most common type of pneumonia (caused by *Streptococcus pneumoniae*) there is often a preceding history of a viral infection.

With *Streptococcus pneumoniae* infection, the patient rapidly becomes more ill with a high temperature (up to 39.5 °C), pleuritic pain and a dry cough.

One day or two days later, rusty-colored sputum is produced and at about the same time the patient may develop labial herpes simplex.

The patient breathes rapidly and shallowly, the affected side of the chest moves less and signs of consolidation may be present together with a pleural rub.

(137) (A) Acute attack of bronchial asthma.

Bronchial asthma is common and it can be serious.

About 1 in 7 teenagers and 1 in 10 adults have bronchial asthma.

In most patients with bronchial asthma, chest radiography findings are normal or may indicate hyperinflation.

- Patients with acute severe bronchial asthma typically have: inability to complete a sentence in one breath. e. Respiratory rate <25/min.

3- Tachycardia <110 bpm

EFV > 50% of predicted normal or best.

ABG provides important information in acute bronchial asthma.

This test may reveal dangerous levels of hypoxemia or hypercarbia secondary to hypoventilation; usually, results are consistent with respiratory alkalosis.

(138) (C) Vitamin B6 (pyridoxine).

- Pyridoxine deficiency can occur in treatment with isoniazid.

(139) (C) Smoking cessation.

Smoking cessation continues to be the most important therapeutic intervention for chronic obstructive pulmonary disease.

Most patients with chronic obstructive pulmonary disease have a history of smoking or are currently smoking tobacco products.

Smoking cessation plan is an essential part of a comprehensive management plan.

(140) (C) Postnasal drip.

One of the most common causes of an acute or subacute cough is a viral respiratory tract infection.

In adults with a chronic cough, e.g. a cough that lasts longer than 8 weeks, more than 90% of cases are due to post-nasal drip, bronchial asthma, eosinophilic bronchitis and gastroesophageal reflux disease. i.e. causes of chronic cough are similar in children with the addition of bronchitis.

(141) (A) Dyspnea.

Dyspnea: difficult or labored breathing; shortness of breath.

Tachycardia: abnormally rapid heart rate.

Bradycardia: slowness of the heartbeat, as evidenced by a slowing of the pulse rate to less than 60 bpm. Tachypnea: very rapid respiration.

(142) (B) Cheyne-stokes respiration.

- Cheyne-stokes respiration is also known as periodic respiration, with cycles of respiration that are increasingly deeper then shallower with possible periods of apnea.
- Typically, over a period of 1 minute, a 10-20 second episode of apnea or hypopnea occurs followed by breaths of increasing depth and frequency.
- The cycle then repeats itself.
- It may be caused by damage to respiratory center or by physiological abnormalities in chronic heart failure and is also seen in newborns with immature respiratory systems and in visitors new to high altitudes.

(143) (B) Hypoxia.

- Factors that move the hemoglobin-oxygen dissociation curve to the right are those physiological states where tissues need more oxygen.
- For example, during exercise muscles have a higher metabolic rate and consequently need more oxygen, produce more carbon dioxide and lactic acid and their temperature rise.
- So, the standard curve is shifted to the right by an increase in temperature, 2,3-diphosphoglycerate or PCO₂ or a decrease in pH.

(144) (A) Azithromycin.

- The primary microorganisms causing this group of diseases are viruses, atypical bacteria, penicillin-sensitive *Streptococcus pneumoniae* and *Haemophilus influenzae*.
- Recommended management is with a macrolide antibiotic such as azithromycin or clarithromycin for 7-1 days.

(145) (D) Ceftriaxone.

- Initially, invasive and serious Hib infections are best treated with an IV third-generation cephalosporin until antibiotic sensitivity data become available.

(146) (C) Depression.

- The effects of oxygen toxicity may be classified by the organs affected, producing three principal forms:
 - 1- Central nervous system: characterized by convulsions followed by unconsciousness, occurring under hyperbaric conditions.
 - 2- Pulmonary characterized by difficulty in breathing and pain within the chest, occurring when breathing elevated pressures of oxygen for extended periods.
 - 3- Ocular (retinopathic conditions), characterized by alterations to the eyes when breathing elevated pressures of oxygen for extended periods.

(147) (A) Add a corticosteroid inhaler.

- Bronchial asthma is classified as moderate persistent if symptoms occur daily.
- Flare-ups occur and usually last several days.
- Patients with moderate persistent bronchial asthma are generally treated with a combination of medications. - The treatment: medium-dose inhaled corticosteroids alone and with cromolyn sodium or nedocromil, a leukotriene modifier, a long-acting bronchodilator such as theophylline or long-acting beta₂-agonist.

(148) (B) H2-blockers.

- Acute gastritis can be broken down into 2 categories:

Erosive (e.g. superficial erosions, deep erosions, hemorrhagic erosions).

2 Non erosive (generally caused by *Helicobacter pylori*).

Surgical intervention is not necessary, except in the case of phlegmonous gastritis. With this entity, surgical intervention with resection of the affected area may be the most effective form of treatment.

(149) (C) Rice.

Celiac disease is an immune reaction to eating gluten, a protein found in wheat, barley and rye.

- Rice does not contain gluten.

(150) (B) Uveitis.

uveitis is defined as inflammation of the uveal tract, which includes the iris, ciliary body and choroid.

- Medical histories that increase the likelihood that uveitis is the cause of ocular pain include: autoimmune diseases, sexually transmitted diseases, particularly syphilis and chlamydia, TB and AIDS.

Symptoms include pain, redness, photophobia, excessive tearing and decreased vision.

(151) (A) It carries an increased risk of adenocarcinoma.

Barrett's esophagus is a complication of chronic gastroesophageal reflux disease.

The reason for the great interest in Barrett's esophagus is that it is associated with *an* increased risk of cancer of the esophagus.

- The type of cancer that occurs in patients with Barrett's is adenocarcinoma, which arises from the metaplastic intestinal tissue.

(152) (B) Ulcerative colitis.

Bloody diarrhea is a hallmark for ulcerative colitis.

- Crypt abscesses and a friable mucosa are also commonly found in this condition.

(153) (A) It carries an increased risk of malignancy.

- In ulcerative colitis there is a risk of developing colon cancer.
- Options B, C and D are associated with Crohn's disease.

(154) (B) Primary biliary cirrhosis.

- Primary biliary cirrhosis is a chronic disease of the liver, presumably autoimmune in nature, which leads to progressive cholestasis and often end-stage liver disease.

The main signs and symptoms include fatigue, pruritus, right upper quadrant discomfort, hepatomegaly, hyperpigmentation, splenomegaly, jaundice, xanthoma, xanthelasmata and Kayser-Fleischer rings.

Complications of cirrhosis and portal hypertension include fluid retention in the abdomen (ascites), esophageal varices, hepatic encephalopathy, including coma in extreme cases.

Association with an extrahepatic autoimmune disorder such as rheumatoid arthritis or Sjögren's syndrome occurs in up to 80% of cases.

Lab findings include significant elevations of alkaline phosphatase levels, increased lipid and cholesterol levels and an increased HDL fraction, alanine aminotransferase, aspartate aminotransferase and bilirubin, the hallmark of primary biliary cirrhosis is the presence of antimitochondrial antibodies in the serum.

(155) (A) Omeprazole.

- Omeprazole is proton pump inhibitor, it decreases the amount of acid produced in the stomach.

(156) (A) Omeprazole for 2 weeks and clarithromycin and amoxicillin for one week.

- Standard eradication therapies are successful in approximately 90% of patients.
- Metronidazole, clarithromycin, amoxicillin, tetracycline and bismuth are the most widely used agents to eradicate *Helicobacter pylori* infection.
- Resistance to amoxicillin (1-2%) and tetracycline (>1%) is low except in countries where these antibiotics are available without prescription and resistance may exceed 50%.
- Quinolones, such as ciprofloxacin, furazolidone and rifabutin, are also used when standard regimens have failed (rescue therapy).
- Bismuth suppresses *Helicobacter pylori* effectively.
- None of these drugs is effective alone.
- Eradication regimens usually comprise 2 antibiotics given with powerful acid suppression in the form of a proton pump inhibitor, all given for 7 days.
- Example regimes are:
 - 1- omeprazole 20 mg and clarithromycin 500 mg and amoxicillin 1 gm - all twice daily
 - 2- omeprazole 20 mg and metronidazole 400 mg and clarithromycin 500 mg - all twice daily.

(157) (A) Cimetidine.

- Cimetidine competitively inhibits the action of histamine at H₂ receptors and thus represents a new class of pharmacological agents; the histamine H₂ receptor antagonists.
- Cimetidine is not an anticholinergic agent
- Cimetidine inhibits both daytime and nocturnal basal gastric acid secretion.
- Cimetidine also inhibits gastric acid secretion stimulated by food, histamine, pentagastrin, caffeine and insulin.
- Its ability to inhibit gastric acid secretion via this unique mechanism of action permits a new approach to the treatment of acid-related gastrointestinal disorders.
- In addition to its antisecretory effects, cimetidine also has cytoprotective properties.
- In therapeutic studies, patients with NSAID-induced lesions or ulcers had symptomatic relief and healing when cimetidine was co-administered with the existing NSAIDs therapy.
- Indications and clinical uses:
 - Primary therapy for conditions where the inhibition of gastric acid secretion is likely to be beneficial such
 - 1- Duodenal ulcer therapy.
 - 2- Non-malignant gastric ulcer therapy.
 - 3- Prophylaxis of recurrent duodenal or gastric ulcer.
 - 4- Gastroesophageal reflux disease.
 - 5- Management of upper gastrointestinal hemorrhage.
 - 6- Pathological hypersecretion associated with Zollinger-Ellison syndrome, systemic mastocytosis and multiple endocrine adenomas.
 - 7- Prophylaxis of stress ulceration.
 - 8- Prophylaxis of acid aspiration pneumonitis.
 - 9- Adjunctive therapy in the management of cystic fibrosis in children.
 - 10- Treatment of NSAID-induced lesions (ulcers, erosions) and gastrointestinal symptoms and prevention of their recurrence.

(158) (B) Clostridium difficile.

- Pseudomembranous colitis is caused by Clostridium difficile, which releases strong toxins that irritate the colon.

(159) (B) Salmonella poisoning.

- This is a case of food poisoning.
- Salmonellosis is a type of food poisoning caused by the Salmonella bacteria.
- Symptoms of salmonellosis include diarrhea, fever and abdominal cramps.
- They develop 12-72 hours after infection and the illness usually lasts 4-7 days.

(160) (B) Hepatitis C.

- Hepatitis C is transmitted sexually and by blood transfusion.

(161) (A) Peptic ulcer.

- Ibuprofen is a NSAID.
- Aspirin and other NSAIDs deplete mucosal prostaglandins by inhibiting the cyclo-oxygenase pathway, which leads to mucosal damage.
- 50% of patients taking regular NSAIDs will develop gastric mucosal damage and approximately 30% will have ulcers on endoscopy.
- Only a small proportion of patients have symptoms (about 5%) and only 1-2% have a major problem, e.g. gastrointestinal bleed.
- Because of the large number of patients on NSAIDs, including low-dose aspirin for vascular prophylaxis, this is a significant problem, particularly in the elderly.
- Helicobacter pylori and NSAIDs are independent and synergistic risk factors for the development of ulcers.

(162) (A) Fistula formation.

- Fistula is a one complication of Crohn's disease, a disease that involves the full thickness of the gastrointestinal wall and skips lesions.

(163) (B) Clostridium difficile.

- Clostridium difficile causes antibiotic-associated diarrhea, colitis and pseudomembranous colitis.
- It is a Gram-positive, anaerobic, spore-forming bacillus and is found as part of the normal bowel flora in 3-5% of the population and even more commonly (up to 20%) in hospitalized people.
- Diagnosis is made by detecting A (enterotoxin) or B (cytotoxic) toxins in the stools by ELISA techniques.

(164) (B) Achalasia cardia.

- Achalasia is a primary esophageal motility disorder characterized by the absence of esophageal peristalsis

and impaired relaxation of the lower esophageal sphincter in response to swallowing.

- The lower esophageal sphincter is hypertensive in about 50% of patients.
- These abnormalities cause a functional obstruction at the gastroesophageal junction.
- It is characterized by the following signs and symptoms: dysphagia (most common), regurgitation, chest pain, heartburn and weight loss.
- Laboratory studies are noncontributory.
- Studies that may be helpful include:
 - 1- Barium swallow: bird's beak appearance, esophageal dilatation.
 - 2- Esophageal manometry (the criterion standard): incomplete lower esophageal sphincter relaxation in response to swallowing, high resting lower esophageal sphincter pressure, absent esophageal peristalsis.
 - 3- Prolonged esophageal pH monitoring to rule out gastroesophageal reflux disease and determine whether the abnormal reflux is being caused by treatment.
 - 4- Esophagogastroduodenoscopy to rule out cancer of the gastroesophageal junction or fundus
 - 5- Concomitant endoscopic US if a tumor is suspected.

(165) (B) Amoebic dysentery (entameba histolytica).

- Diarrhea is the most common symptom of amoebic dysentery.
- Patients with amebic colitis typically present with cramping abdominal pain, watery or bloody diarrhea and weight loss or anorexia.
- Fever is noted in 10-30% of patients.
- Microscopic examination of fresh stool smears for trophozoites that contain ingested RBCs.

(166) (A) Metronidazole and vancomycin.

- Oral metronidazole and oral vancomycin have similar efficacy in the treatment of mild to moderate *Clostridium difficile*-associated with diarrhea.
- However, metronidazole is the empiric treatment of choice because of its cost and the risk of selection for vancomycin-resistant enterococci in the stool with oral vancomycin.

(167) (A) Ischemic mesentery.

- Mesenteric ischemia is caused by decreased intestinal blood flow that can be caused by a number of mechanisms.
- The blood supply to the intestine is derived predominantly from 3 major gastrointestinal arteries that arise from the abdominal aorta.
- The vast majority of cases are secondary to arterial causes.
- The classic picture of a patient with acute mesenteric ischemia involves severe abdominal pain, bloody stools and a history of risk factors like atrial fibrillation.

(168) (D) Hip CT.

- In adults, a musculoskeletal complication (commonly arthritis) often occurs with the attacks of Crohn's disease.
- Commonly affects large joints of lower extremity.

(169) (B) Liver US and alpha-fetoprotein blood test.

- Low alpha-I-antitrypsin levels and increased alpha fetoprotein levels to above 400 ng/ml are considered diagnostic of hepatocellular carcinoma with appropriate imaging studies.
- Accurate diagnosis and surgical planning require adequate cross-sectional imaging studies.
- While US is commonly used for screening, it does not provide sufficient anatomical detail for planning surgical resection or ablation.

(170) (B) Positive hepatitis A IgM.

- This is a case of hepatitis A.
- Blood tests may show raised IgM and IgG antibodies to hepatitis A.
- IgM is usually positive before IgG.

(171) (C) They can be distinguished between it and duodenal ulcer.

- Inflammation of the lower esophagus from regurgitation of acid gastric contents is characterized by substernal pain, usually due to malfunction of the lower esophageal sphincter.

(172) (B) Colorectal cancer.

The stool guaiac test or guaiac fecal occult blood test is one of several methods that detect the presence of fecal occult blood, which is defined as blood in the feces that cannot be seen.

- One major reason for testing for blood in stools is the detection of colorectal cancer.
- Smoking, obesity, intermittent diarrhea and bleeding per rectum are associated with colorectal cancer.

(173) (E) Shigella.

The host response to primary Shigella infection is characterized by the induction of an acute inflammation, which is accompanied by polymorphonuclear cell infiltration, resulting in massive destruction of the colonic mucosa.

Apoptotic destruction of macrophages in subepithelial tissue allows survival of the invading shigella and inflammation facilitates further bacterial entry.

(174) (A) Theophylline.

Certain medications and dietary supplements can irritate the lining of the esophagus, causing heartburn pain and others can increase the severity of gastroesophageal reflux disease.

Examples include narcotics, progesterone, theophylline and quinidine.

(175) (D) Diffuse esophageal spasm.

Corkscrew appearance is characteristic of esophageal spasm.

(176) (A) Tricyclic antidepressants.

- Tricyclic antidepressants are used in the treatment of peptic ulcer.

Gastric ulcers are not considered side effects of tricyclic antidepressants.

(177) (C) Hepatitis C.

- Hepatitis C is often passed through contact with contaminated blood, most commonly through needles shared during illegal drug use.

(178) (C) Peptic ulcer.

- Ibuprofen, which is a NS AID, may increase the risk of gastrointestinal irritation, inflammation, ulceration, bleeding and perforation.
- These events can be fatal and may occur at any time during therapy and without warning.
- NSAIDs should be used with caution in patients with a history of gastrointestinal disease (such as bleeding or ulcers), as concurrent therapy with aspirin, anticoagulants and/or corticosteroids, in patients who smoke tobacco or drink alcohol and in elderly or debilitated patients.
- The lowest effective dose should be used for the shortest duration of time, consistent with individual patient goals, to reduce the risk of adverse gastrointestinal events
- Alternative therapies should be considered for patients at high risk.
- When used concomitantly with aspirin, a substantial increase in the risk of gastrointestinal complications (e.g. ulcer) occurs: concomitant gastroprotective therapy (e.g. proton pump inhibitors) is recommended.

(179) (A) Penicillin.

- Penicillin prophylaxis and vaccines against various serotypes of Streptococcus pneumonia have been used to prevent infection with Streptococcus pneumonia in sickle cell anemia patients.
- Over the years, penicillin prophylaxis has proven to be more effective than vaccination.

(180) (B) Splenomegaly.

- Polycythemia vera is a stem cell disorder characterized as a panhyperplastic, malignant and neoplastic marrow disorder.
- The most prominent feature of this disease is an elevated absolute RBCs mass because of uncontrolled RBCs production.
- This is accompanied by increased white blood cell (myeloid) and platelet (megakaryocytic) production, which is due to an abnormal cloning of the hematopoietic stem cells with increased sensitivity to the different growth factors for maturation.
- Polycythemia vera, itself, is often asymptomatic.
- Occasionally, increased red cell volume and viscosity produce weakness, headache, light-headedness, visual disturbances, fatigue and dyspnea.
- Pruritus often occurs, particularly after a hot bath.
- The face may be red and the retinal veins engorged.
- The palms and feet may be red, warm and painful, sometimes with digital ischemia (erythromelalgia).
- Hepatomegaly is common and more than 75% of patients have splenomegaly which may be massive.

(181) (B) Vitamin B12 deficiency.

- Vitamin B12 deficiency may occur in blind loop syndrome or after extensive resection of the distal ileum.
- Patients with extensive small bowel resection are at risk of nutrient, mineral and vitamin deficiencies because of the loss of the absorptive surface.
- The risk of nutrient deficiency is greatest during and after the transition to enteral feeding, since the degree of intestinal adaptation and the absorption of nutrients are unpredictable.
- Serum levels of calcium, magnesium, zinc, selenium and the fat soluble vitamins (A, D, E and K) should be monitored every 3 months.
- In addition, patients who have had more than 60 cm of ileum resected may become deficient in vitamin B12, despite adequate calorie and protein absorption and supplementation may be required.

(182) (A) Cerebral infarction.

The cerebrovascular complications associated with sickle cell disease are cerebral infarction, intracranial hemorrhage and cognitive and behavioral changes.

- Cerebrovascular accident is a leading cause of death in both children and adults with sickle cell disease.
- The type of stroke varies with age.

An ischemic infarct is most common in children between 2-9-year-old, is uncommon between 20-29-year-old and has a second peak in adults over 29-year-old.

Hemorrhagic stroke can occur in children but is most frequent in individuals between 20-29-year-old.

A cooperative study of sickle cell disease found that of the first cerebrovascular accident in patients with sickle cell disease, 54% were caused by cerebral infarction, 11% by transient ischemic attack, 34% by intracranial hemorrhage and 1% had features of both infarction and hemorrhage.

Cerebral infarction is defined clinically by the presence of typical symptoms that last for at least 24 hours. The symptoms of infarction stroke include hemiparesis, dysphasia, gait disturbance and a change in the level of consciousness.

These findings are associated with a corresponding radiographic lesion.

Stroke is usually associated with narrowing or occlusion of the large cerebral arteries.

(183) (A) Acute myeloid leukemia.

- Bone marrow aspiration and biopsy (usually unilateral) is a key component in the diagnosis of acute myeloid leukemia.
- The bone marrow is usually hypercellular due to a partial or almost total replacement of the normal cellular components of the marrow by immature or undifferentiated cells, although acute myeloid leukemia can sometimes present with a hypocellular marrow.

The bone marrow biopsy gives a general overview of the degree of involvement and specific histological features associated with the process (e.g. fibrosis, necrosis).

- The aspirate provides material for a 500-cell differential count to determine the percentage of blasts in the marrow; it also provides for detailed cytologic evaluation of the blasts and other cells that may be residual normal hematopoietic elements or abnormal cells maturing from the blasts.

(184) (A) Hospitalization and pain management as well as observation.

- Treatment of sickle cell anemia includes:
 - hydroxyurea to increase the amount of fetal hemoglobin.
 - Haemophilus influenzae and pneumococcal vaccines.
 - Prophylactic penicillin for children under 5-year-old.

- Acute crisis: analgesia and hydration.

Patients with sickle cell anemia at home and in the hospital use a range of pain medications depending on the severity of their pain.

- In the majority of cases a moderate to severe painful crisis warrants hospitalization and medical intervention.

Management often includes IV fluid to prevent or correct dehydration, pain relief (often opiates), rest and an investigation of the cause of the crisis and its management where applicable; for example, treating a precipitating infection.

(185) (B) Age.

- The median age of chronic myeloid leukemia patients is approximately 60-year-old and the age is still considered an important prognostic factor.
- However, older age is a consistently poor prognostic factor in patients with chronic myeloid leukemia.
- The negative effect of age on long-term survival has been consistently observed with most effective therapeutic modalities: including both pharmacological therapy (busulfan, hydroxyurea and interferon) and allogeneic transplantation.
- Their poor prognosis may have been due, at least in part, to poorer tolerability and inadequate treatment delivery.

(186) (B) Abnormal release of histamine.

- Pruritus results from increased histamine levels released due to increased numbers of basophils and mast cells and can be exacerbated by a warm bath or shower.
- This occurs in up to 40% of patients with polycythemia vera.

(187) (A) DIC.

- DIC involves abnormal, excessive generation of thrombin and fibrin in the circulating blood.
- During the process, increased platelet aggregation and coagulation factor-consumption occur.
- DIC that evolves slowly over weeks or months primarily causes venous thrombotic and embolic manifestations (for example, DVT, thrombosis and pulmonary embolism).
- DIC that evolves rapidly (over hours or days) causes primarily bleeding.

(188) (D) Age.

- Chronic lymphocytic leukemia is more common among the elderly, so age is considered a major risk factor.
- Chronic lymphocytic leukemia is not known to be associated with viral infection, radiation exposure or carcinogenic chemicals, like benzene.
- The incidence of chronic lymphocytic leukemia varies markedly between different ethnic groups. Asians show a very low incidence of chronic lymphocytic leukemia wherever they live in the world. This suggests that there is a genetic influence on the risk of contracting this condition.
- Close relatives of chronic lymphocytic leukemia patients appear more likely than other people to have some form of cancer of the lymphatic system but it is important to stress that these cancers are still rare in this group.

(189) (C) Nephrotic syndrome.

- Patients with nephrotic syndrome have a higher risk of venous and arterial thrombosis; mainly DVT and renal vein thrombosis.
- The prevalence is estimated at 5% and 60%, respectively, mainly in patients with membranous nephropathy.

(190) (C) Decreased serum iron and decreased TIBC.

- The serum iron concentration and transferrin level (also measured as TIBC) are both low and the percentage of transferrin saturation is usually normal, which should distinguish anemia of chronic disease from iron deficiency anemia, in which transferrin saturation is low.

However, approximately 20% of patients with anemia of chronic disease have low transferrin saturations in the iron deficiency range (as low as 10%), even though only about 25% of such patients are truly iron deficient.

- In the remaining patients, the reduced ability to release iron from macrophages is presumably responsible for the low serum iron levels and low transferrin saturation.

(191) (A) Iron deficiency anemia.

The classic presentation of iron deficiency anemia is:

- 1- Low hemoglobin level, at 8 gm/dl.
 - 2- MCV is low at 75 fl.
 - 3- MCH is low.
 - 4- A blood smear shows microcytic, hypochromic red cells.
 - 5- Serum iron is low (10 mcg/dl).
 - 6- TIBC is elevated (400 mcg/dl), resulting in a low transferrin saturation of 2.5%.
 - 7- The plasma ferritin concentration is markedly reduced (10 ng/ml).
 - 8 - Iron stores are absent in the patient's bone marrow as judged by microscopic examination of a bone marrow aspirate; the gold standard test for estimating iron stores.
- Finally, the patient responds quickly to a therapeutic trial of oral iron, with a reticulocytosis, followed by elevations in the hemoglobin concentration and hematocrit.

(192) (A) Hemoglobin electrophoresis.

- Hemoglobin electrophoresis will show increased levels of hemoglobin A2 in anemic patients.
- The diagnosis of beta-thalassemia major is normally made in all patients at around 6-12-month-old due to the presence of pallor, irritability, growth retardation, abdominal swelling due to hepatosplenomegaly and jaundice.

The laboratory examination at that time will show severe anemia with markedly abnormal hypochromic, microcytic red cells and with all of the classical findings of severe hemolytic anemia (e.g. increased indirect bilirubin and lactate dehydrogenase and reduced or absent haptoglobin).

The diagnosis is confirmed by hemoglobin electrophoresis.

- Hemoglobin A is absent or severely reduced; only hemoglobins F and A2 are present.
- Variable amounts of hemoglobin A will be present in those who are subsequently treated with red cell transfusions, but levels of hemoglobins F and A2 will remain elevated.

(193) (A) Fresh frozen plasma.

- The two main treatment options for patients with Von Willebrand disease are desmopressin and transfusion therapy.

Platelet transfusions may be helpful in some patients with Von Willebrand disease whose disease is refractory to other therapies.

Cryoprecipitate and fresh frozen plasma contain functional von Willebrand factor but should be avoided whenever possible because of the potential transmission of viral disease.

(194) (C) Von Willebrand disease.

- The two main treatment options for patients with Von Willebrand disease are desmopressin and transfusion therapy
- With regard to the latter therapy platelet transfusions may be helpful in some patients with Von Willebrand disease whose disease is refractory to other therapies Cryoprecipitate and fresh frozen plasma contain functional von Willebrand factor but should be avoided whenever possible because of the potential transmission of viral disease
- An additional drawback of frozen plasma is the large infusion volume is often required

(195) (A) Clotting factors.

- Hemophias are common : hereditary bleeding disorders caused by deficiencies of either clotting factor VIII or IX.
- The extent of factor deficiency determines the probability of a severe or bleeding. Bleeding into deep tissues or into its usual development within hours of trauma
- Thrombocytopenia is suspected in a patient with an elevated partial thromboplastin time (PTT) and normal prothrombin time (PT) and platelet count: it is confirmed by specific factor assays.
- Treatment includes replacement of the deficient factor if acute bleeding is suspected confirmed or likely to develop e.g. before surgery
- Hemophilia A (factor VIII deficiency) affects about 1 in 10,000 patients with hemophilia.
- Hemophilia B (factor IX deficiency) is less common : clinical manifestations seen on test abnormalities and X-linked genetic transmission as hemophilia A.
- Specific factor assays are required to distinguish them

(196) (A) Acute myeloid leukemia.

- In acute myeloid leukemia, laboratory studies usually reveal pancytopenia although any combination of anemia, thrombocytopenia and leukopenia or leukocytosis may exist.
- Blasts and other immature WBCs may be present in the peripheral blood and because of rapid cell turnover, serum lactic dehydrogenase and uric acid levels may be elevated.
- Acute myeloid leukemia can usually be diagnosed from a peripheral blood smear, but bone marrow aspirate and biopsy should always be performed to determine the proper classification.
- Bone marrow aspirate from these patients has more than 30% blasts (< 5% blasts is normal) of which >3% are positive for myeloperoxidase stain.
- Patients whose blood is negative for all stains (acute undifferentiated leukemia) are usually treated as acute myeloid leukemia patients if immunophenotyping demonstrates myeloid markers.

(197) (A) Hodgkin's lymphoma.

- Hodgkin's lymphoma is a localized or disseminated malignant proliferation of cells of the lymphoreticular system, primarily involving lymph node tissue, the spleen, liver and bone marrow.
- Symptoms include painless lymphadenopathy, sometimes with fever, night sweats, unintentional weight loss, pruritus, splenomegaly and hepatomegaly.
- Diagnosis is based on lymph node biopsy.
- Treatment is curative in about 75% of cases and consists of chemotherapy with or without radiation therapy.

(198) (A) Hodgkin's lymphoma.

- Hodgkin's lymphoma is a neoplasm characterized by the presence of clonal malignant Hodgkin/Reed-Sternberg cells in a reactive cellular background comprised of variable numbers of eosinophils, plasma cells and lymphocytes.

Historically, Hodgkin/Reed-Sternberg cells have been enigmatic and difficult to study, as they often constitute less than 1% of the cells in involved tissues.

The central pathogenic issues in Hodgkin's lymphoma are: the origin of Hodgkin/Reed-Sternberg cells, the identity of the events underlying the transformation of Hodgkin/Reed-Sternberg cells and the nature of the signals that produce the intense, characteristic tissue response.

(199) (A) Pernicious anemia.

- Pernicious anemia refers specifically to vitamin B-12 deficiency resulting from a lack of production of intrinsic factor in the stomach.

The onset of pernicious anemia is usually insidious and vague.

The classic triad of weakness, sore tongue and paresthesia may be elicited but is not usually the chief symptom complex.

Ultimately, medical attention is sought because of symptoms suggestive of cardiac, renal, genitourinary, gastrointestinal, infectious, mental, or neurological disorders and the patient is found to be anemic with macrocytic indices.

(200) (C) The patient requires a prophylactic antibiotic even if they have been vaccinated.

Children with sickle cell disease should receive all routine childhood immunizations. The new 7-valent pneumococcal conjugate vaccine decreases the incidence of invasive pneumococcal infection in children younger than 2-year-old and should be given to infants with sickle cell disease on the same schedule as other children.

- However, because children with sickle cell disease remain susceptible to life-threatening pneumococcal infections, they should receive the 23-valent polysaccharide pneumococcal vaccine if 2-year-old or older;

if the patient is 2-year-old or younger, vaccination should be initiated at 9 months of age.

These immunizations do not negate the need for penicillin prophylaxis which should continue until 5 years of age.

(201) (C) Gram-positive streptococci.

One hundred and nine consecutive episodes of septicemia were retrospectively evaluated in 61 children with malignancy.

In addition, the records of all pediatric oncology patients who received high-dose cytarabine chemotherapy were reviewed.

Gram-positive organisms accounted for 82.6% of the septicemic episodes.

- In the total group, coagulase negative staphylococci and viridans streptococci accounted for 35.8% and 28.4% of the episodes, respectively.

(202) (D) Genetic screening for hereditary anemia.

- In the first year of life measures to prevent iron deficiency include completely avoiding cow's milk, starting iron supplementation at 4-6 months of age and using an iron-fortified formula instead of breastfeeding; a low-iron formula should not be used.

In the second year of life, iron deficiency can be prevented by a diversified diet that is rich in sources of iron and vitamin C, limiting cow's milk consumption and providing a daily iron-fortified vitamin.

Infants and toddlers who did not receive primary prevention methods should be screened for iron deficiency.

(203) (C) Acute chest syndrome.

Acute chest syndrome, characterized by respiratory or chest symptoms, fever and a new pulmonary infiltrate on chest radiography.

- Acute chest syndrome may complicate any painful episode or other acute medical condition in a patient with sickle cell disease.
- For example 30% of all patients with hemoglobin SS disease will have one episode of acute chest syndrome - 50% of these patients will have recurrent episodes.

Because survival is improved with aggressive treatment, urgent consultation with a hematologist or pulmonologist is advised.

For persistent hypoxemia or respiratory deterioration in the face of conservative measures, the transfusion of RBCs is indicated.

(204) (A) Trial of iron therapy.

- This is a case of iron deficiency anemia.
- The most common presentation of iron deficiency anemia is an otherwise asymptomatic, well-nourished infant or child who has a mild to moderate microcytic hypochromic anemia.
- Much less frequent are infants with severe anemia, who present with lethargy, pallor, irritability, cardiomegaly, poor feeding and tachypnea.
- For infants and young children presenting with a mild microcytic anemia and a presumptive diagnosis of iron deficiency anemia, the most cost effective strategy is a therapeutic trial of iron.
- For infants and young children with confirmed iron deficiency anemia, ferrous sulfate remains the most cost-effective treatment.
- For maximal absorption, the iron supplement should be given between meals and with juice.
- Iron absorption is increased if the ferrous sulfate is given with juice rather than milk.

(205) (B) 6 months.

- Anticoagulant medications work by inhibiting or altering steps in the coagulation cascade.
- Medications such as warfarin are available in oral forms, whereas heparin and the low-molecular-weight heparins require either IV or SC routes for treatment.
- Warfarin is used in patients that have had DVT in order to prevent recurrence or progression.
- Warfarin is generally continued for 3-6 months.
- Continuation of warfarin in this setting depends on other risk factors.
- Warfarin is also used in some settings for patients with strokes, heart attacks and peripheral vascular disease.

(206) (B) Avascular necrosis.

avascular necrosis * the femoral head is characterized by hip pain with weight bearing avascular necrosis of the femoral head is found in individuals of all ages, with osteoarthritis complicating children as young as 5- year old prevalence of its complication increases with age first symptom of pain has been noted at an average age of 12-year-old range 7-15-year-old

(207) (B) 2.0-3.0

INR is used to monitor warfarin therapy.

The INR is calculated from the following formula: $INR = \frac{\text{patient PT}}{\text{control PT}}$
The therapeutic range for the INR varies with the clinical indication most indications the recommended range is 2.0-3.0. higher or lower INR range may be recommended in certain clinical settings.

(208) (A) Superior vena cava obstruction.

Superior vena cava obstruction or superior vena cava syndrome is caused by compression or invasion of mediastinal masses tumors and/or lymphadenopathy stenosis of the superior vena cava or thrombosis.

Metastatic malignancy accounts for 90% of cases of superior vena cava syndrome.

Lung cancer and non-Hodgkin lymphoma together cause about 95% of cancer-related superior vena cava syndrome.

Puzzlingly, Hodgkin lymphoma rarely causes superior vena cava syndrome, despite its common effect on the mediastinal lymph nodes.

Patients often complain of a variety of symptoms, the most common of which are facial or neck swelling (82%), arm swelling (68%), dyspnea (66%), cough (50%) and dilated chest veins 38%

- Patients may also report chest pain, dysphagia, hoarseness, headache, confusion, dizziness and syncope.

(209) (B) Ferritin.

- The assessment of serum or plasma ferritin has replaced the assessment of bone marrow iron stores as the gold standard for the diagnosis of iron deficiency in most patients.
- Virtually all patients with serum ferritin concentrations less than 10-15 ng/ml are iron deficient, with a sensitivity of 59% and a specificity of 99%.

(210) (A) Assess his iron levels.

- Anemia is a common problem with serious consequences in older persons.

Approximately one third of persons with anemia have a nutritional deficiency; one third have anemia due to chronic inflammation, chronic kidney disease, or both; and one third have unexplained anemia.

- Once anemia is confirmed, a CBC is helpful.
- If bleeding or iron deficiency anemia is clinically suspected, the measurement of serum ferritin is also warranted.

- Iron deficiency anemia often is caused by gastrointestinal bleeding and requires further investigation in older persons
- Even in asymptomatic patients, more than one half of individuals with anemia are found to have a bleeding-related lesion on endoscopic evaluation with esophagogastroduodenoscopy and colonoscopy. All anemic participants undergo a clinical hematologic evaluation, including history and physical examination, CBC with red cell indices (iron, transferrin, ferritin), levels of vitamin B12 and folate and a review of a peripheral blood smear.

(211) (B) Clotting factor deficiency.

- This is a case of hemophilia
- Depending on the level of factor VIII activity, patients with hemophilia may present with easy bruising, inadequate clotting of traumatic injuries or in the case of severe hemophilia, spontaneous hemorrhage.
- Hemarthrosis or bleeding into the joints is a clinical hallmark of hemophilia.

(212) (A) Chronic renal failure.

- A low reticulocyte count usually points to decreased RBCs production as the primary mechanism responsible for the anemia whereas an elevated reticulocyte count points to increased RBCs destruction or hemolysis as the most likely cause.
- Although decreased RBCs production is the main mechanism in both anemia of chronic illness and anemia of chronic kidney disease, often the anemia is due to a combination of factors, including concomitant blood loss.
- Therefore, a reticulocyte count should always be interpreted with caution.

(213) (C) Impaired FBS.

- In asymptomatic patients whose random serum glucose level suggests diabetes (>140 mg/dl), an FBS or glycosylated haemoglobin (HbA1c) level should be measured.
- An FBS level of 100-125 mg/dl is considered as impaired fasting glucose and an FBS level of less than 100 mg/dl is considered as normal fasting glucose.
- However an FBS of 91-99 mg/dl is a strong independent predictor of future diabetes mellitus type 2.

Diabetes diagnostic criteria

Condition	2 hour glucose mg/dl	Fasting glucose mg/dl	HbA1c %
Normal	< 140	< 110	< 6.0
Impaired fasting glycaemia	< 140	≥ 110 and < 126	6.0 - 6.4
Impaired glucose tolerance	≥ 140	< 126	6.0 - 6.4
Diabetes mellitus	≥ 200	≥ 126	≥ 6.5

(214) (B) Insulin missed.

- This is case of diabetes mellitus type 1 presented with diabetic ketoacidosis.
- Insulin is always indicated in a patient who has been in ketoacidosis.
- The most common early symptoms of diabetic ketoacidosis are insidious polydipsia and polyuria.
- The following are other signs and symptoms of diabetic ketoacidosis:

lapse and mental status changes.

- Nausea and vomiting that may be associated with diffuse abdominal pain, decreased appetite and dehydration.

3- Rapid weight loss in patients newly diagnosed with diabetes type 1

4- A history of failure to comply with insulin therapy or missed insulin injections due to vomiting or 'logical' tears,

5 Decreased perspiration.

>- Altered consciousness (e.g. mild disorientation, confusion); frank coma is uncommon but may occur in severe cases or with severe dehydration/acidosis.

- The most common scenarios for diabetic ketoacidosis are underlying or concomitant infection (40%).

missed insulin therapy (25%) newly diagnosed previously undiagnosed diabetes (15%)

are associated with / jointly 20% of the various scenarios.

(215) (A) Insulin deficiency which leads to fatty acid utilization and the production of ketones.

to acidosis the body producing large quantities of Ketone bodies via the metabolism of fatty acids since the body is producing insufficient sulfolipids production, ketoacidosis can be smelled on a person's breath.

This is due to the presence of acetone; a direct byproduct of the spontaneous decomposition of acetoacetic acid.

(216) (A) Now and then annually.

The risk of diabetic retinopathy varies with the type and duration of diabetes and with other life events, the screening guidelines differ from one person to another Diabetes mellitus type 1:

people with diabetes type 1 should have eye examinations by an ophthalmologist or optometrist beginning 5 years after they are diagnosed with diabetes, although screening is usually not necessary before puberty.

people who have difficulty with their vision or who require glasses or contacts may need to be seen sooner.

The frequency of subsequent examinations will depend upon the results of the initial exam.

eye exam is usually recommended every 1-2 years after the initial examination.

Diabetes mellitus type 2:

people with diabetes mellitus type 2 should have an eye examination by an ophthalmologist or optometrist when they are first diagnosed with diabetes.

The reason for this is that blood sugar levels often increase over a period or several years before the person is diagnosed

Eye complications can develop during this time and often have no symptoms.

Having an eye examination soon after diagnosis can help to determine if there are eye complications, the extent or severity of the complications and whether treatment is needed.

The frequency of subsequent exams will depend upon the results of the initial

examination, eye exam is usually recommended every 1-2 years after the initial examination.

(217) (A) His condition may resolve spontaneously so no management is necessary.

g ea iy to mid-puberty, pproxim ?ly 2/3 of b y develop various degrees of subareolar hyperplasia of the breasts

- Physiologic pubertal gynecomastia may involve only one breast and it is not unusual for both breasts to irge it disproportionate rates or it different times

(218) (C) It suppresses hepatic gluconeogenesis.

- Metformin inhibits hepatic gluconeogenesis through adenosine 5'-monophosphate activated protein kinase-dependent regulation of the small heterodimer partner.
- Metformin is effective only in the presence of insulin and its major effect is to decrease hepatic glucose output.
- In addition, metformin increases insulin-mediated glucose utilization in peripheral tissues (such as muscl and liver tissue), particularly after meals and has an antilipolytic effect that lowers serum free fatty acid concentrations, thereby reducing substrate availability for gluconeogenesis.
- As a result of the improvement in glycemic control, serum insulin concentrations decline slightly.
- Metformin, which decreases hepatic glucose output and sensitizes peripheral tissues to insulin, has been shown to decrease mortality rates in patients with diabetes mellitus type 2 and is considered a first-line agent.

(219) (A) Inappropriate secretion of antidiuretic hormone.

- The syndrome of inappropriate secretion of antidiuretic hormone is a disorder of impaired water excretion caused by the inability to suppress the secretion of antidiuretic hormone.
- If water intake exceeds the reduced urine output, the ensuing water retention leads to the development of hyponatremia.
- The syndrome of inappropriate secretion of antidiuretic hormone is an important cause of dilutional hyponatremia that has been identified in tumors of the thymus gland, malignant lymphoma and pancreatic neoplasms.
- It occurs predominantly, however, as a result of ectopic secretion of antidiuretic hormone by small cell carcinomas of the lung.
- Since the tumor cells per se are autonomously producing antidiuretic hormone, there is no feedback inhibition from the hypothalamic osmoreceptors and the persistent antidiuretic hormone effect on the renal tubules causes water retention even with concentrated urine; hence the term inappropriate antidiuretic hormorn secretion.
- Laboratory findings include low plasma sodium levels (dilutional hyponatremia), low plasma osmolality and high urine osmolality caused by disproportionate solute excretion without water.

(220) (D) Give one liter of normal saline solution.

- Patients with diabetic ketoacidosis classically present with the triad of uncontrolled hyperglycemia, metabolic acidosis and increased total body ketone concentration.
- Critically ill patients with severe hyperglycemia resulting from diabetic ketoacidosis or hyperglycemic hyperosmolar syndrome should be treated immediately with a bolus of normal saline.
- The average fluid deficit for patients with diabetic ketoacidosis is 3-5 liters.
- Fluid resuscitation in young, otherwise healthy, patients should begin with a rapid bolus of 1 liter of normal saline followed by an infusion of normal saline at 500 ml/hour for several hours.
- These patients should then be given a loading dose of regular insulin at 0.1 units/kg body weight to a maximum of 10 units, followed by an infusion of regular insulin at 0.1 units/kg body weight/hour, to a maximum of 10 units/hour.

(221) (B) Sulfonylurea drugs.

These symptoms are due to hypoglycemia. Sulfonylurea drugs are usually well-tolerated.

- Hypoglycemia is the most common side effect of these drugs and is more common with long-acting sulfonylurea drugs (e.g. chlorpropamide, glyburide and glimepiride).

Thus, the use of long-acting sulfonylureas should be avoided in the elderly.

- A short-acting sulfonylurea, such as glipizide, is preferred.
- In patients who are using sulfonylurea drugs, the presence and frequency of hypoglycemia should be evaluated at each clinic visit.

(222) (C) Human growth hormone.

Growth hormone is produced and released by the pituitary gland.

- When growth hormone is released into the blood, it stimulates the liver to produce another hormone, insulin-like growth factor 1, which causes growth of muscle, bones and cartilage throughout the body.

- The characteristic findings in a patient with excessive growth hormone release are an enlarged jaw (macroglossia) and enlarged, swollen hands and feet.

Manifestations of soft tissue overgrowth include macroglossia, deepening of the voice and paresthesia of the hands (e.g. carpal tunnel syndrome in around 20% of patients).

- Macroglossia and enlargement of the soft tissues of the pharynx and larynx lead to obstructive sleep apnea in about 50% of patients.

The skin thickens, making it hard to puncture and skin tags may appear, and the patient may develop acroosteolysis and some women have acromegaly.

(223) (A) Decreased phagocytosis process.

Hyperglycemia-related impairment of the immune response involves neutrophil chemotaxis, adherence to vascular endothelium, phagocytosis, intracellular bactericidal activity; opsonization cell-mediated immunity are all depressed in diabetics with hyperglycemia. Hyperglycemia caused by decreased insulin availability and increased resistance to insulin can affect cellular response to tissue injury.

There is a delayed response to injury and impaired functioning of immune cells in diabetes mellitus.

(224) (C) Bisphosphonates.

Agents currently available for osteoporosis treatment include bisphosphonates, the selective estrogen receptor modulators raloxifene and calcitonin, denosumab and an anabolic agent teriparatide (human recombinant parathyroid hormone).

All therapies should be given with calcium and vitamin D supplementation. Bisphosphonates are the most commonly used agents for osteoporosis; they have been employed for both treatment and prevention, and oral and IV options are available.

Oral bisphosphonates are considered as an initial therapy because of their efficacy, favorable cost and availability of long-term safety data.

(225) (A) Missing insulin leads to the release of free fatty acids and the formation of ketone bodies.

- **Diabetic ketoacidosis representing the metabolic consequences of insulin deficiency, glucagon excess and counter regulatory hormonal responses to stressful triggers in patients with diabetes.**
- **Diabetic ketoacidosis is more common in younger patients with diabetes mellitus type 1, though it can occur in diabetes mellitus type 2.**
- **Glucose concentrations in diabetic ketoacidosis are often usually < 800 mg/dl.**
- **In states of insulin deficiency, the combination of increased free fatty acid delivery and glucagon excess promotes ketogenesis.**
- **Ketoacidosis results from lipolysis, with synthesis of ketones from free fatty acids in the liver mitochondria.**

(226) (C) Lifestyle and behavioral therapy.

- **Diabetic patients with a systolic blood pressure of 130-139 mmHg or a diastolic blood pressure of 80-89 mmHg should be given lifestyle and behavioral therapy alone for a maximum of 3 months and then, if targets are not achieved, in addition, be treated with pharmacological agents that block the renin-angiotensin system.**
- **A target blood pressure of <130/80 mmHg is reasonable if it can be safely achieved.**

(227) (A) Inhibits the action of thyroid peroxidase (thyroperoxidase).

- **Propylthiouracil is used for the treatment of hyperthyroidism.**
- **Propylthiouracil binds to thyroid peroxidase and thereby inhibits the conversion of iodide to iodine.**
- **Thyroid peroxidase normally converts iodide to iodine (via hydrogen peroxide as a cofactor) and also catalyzes the incorporation of the resulting iodide molecule onto both the 3 and/or 5 positions of the phenol rings of tyrosines found in thyroglobulin.**
- **Thyroglobulin is degraded to produce thyroxine (T4) and triiodothyronine (T3), which are the main hormones produced by the thyroid gland.**
- **Therefore propylthiouracil effectively inhibits the production of new thyroid hormones.**

(228) (D) Nothing.

- **In early pregnancy, physiological changes can mimic biochemical hyperthyroidism that does not require therapy.**
- **True subclinical hyperthyroidism may occur in pregnant women, but it is not typically associated with adverse outcomes during pregnancy and does not require therapy.**
- **10-20% of normal pregnancies have subclinical hyperthyroidism during peak hCG activity.**
- **60% of women with hyperemesis have subclinical or mild overt hyperthyroidism, which resolves without treatment.**

(229) (B) ABG.

The most widely used diagnostic criteria for diabetic ketoacidosis includes a blood glucose level ≥ 20 mg/dl, a moderate degree of ketonemia, serum bicarbonate <15 mEq/l, arterial pH <7.5 and an increased anion gap metabolic acidosis.

The severity of diabetic ketoacidosis is determined primarily by the venous pH level, serum bicarbonate level and mental status of the patient and not by the blood glucose measurement. Although the bicarbonate level typically is low, it may be normal or high in patients with vomiting, etic use, or alkali ingestion.

If the serum osmolality is less than 320 mOsm/kg (520 mmol/kg), etiologies other than diabetic ketoacidosis should be considered.

(230) (A) Angiotensin converting enzyme inhibitors.

Diabetes mellitus and microalbuminuria revert to normal urine albumin excretion without treatment.

Two mainstays of treatment to prevent the progression of diabetic nephropathy have traditionally included achieving adequate glycemic control and lowering blood pressure with angiotensin converting enzyme inhibitors or angiotensin II receptor blockers.

Smoking cessation and decreased dietary protein have also been recommended.

The primary treatment goal is the prevention of end stage renal disease, because microalbuminuria alone are asymptomatic conditions.

Angiotensin converting enzyme inhibitors and angiotensin II receptor blockers are equally effective in preventing the progression of diabetic nephropathy, however, the combination of an angiotensin converting enzyme inhibitors and angiotensin II receptor blockers is not recommended because it provides no additional benefit and actually leads to higher serum creatinine levels and an increased rate of dialysis.

Microalbuminuria (the new term for what was formerly called microalbuminuria) is defined as persistent urinary albumin excretion between 30-300 mg/day (20-200 μ g/min). Moderately increased albuminuria (the new term for what was formerly called macroalbuminuria) refers to albumin excretion above 300 mg/day (200 μ g/min).

(231) (B) Chronic renal failure.

In chronic kidney disease, plasma concentrations of creatinine and urea (which are highly dependent on glomerular filtration) begin a nonlinear rise as glomerular filtration rate diminishes.

Abnormalities of calcium, phosphate, parathyroid hormone, vitamin D metabolism and renal osteodystrophy can occur.

Decreased renal production of calcitriol contributes to hypocalcemia, decreased renal excretion of phosphate results in hyperphosphatemia.

Secondary hyperparathyroidism is common and can develop into renal failure before abnormalities in calcium or phosphate concentrations occur.

For this reason, monitoring parathyroid hormone in patients with moderate chronic renal disease, even before hyperphosphatemia occurs has been recommended.

(232) (A) Cushing's disease.

- Cushing's syndrome is a constellation of clinical abnormalities caused by chronic high blood levels of cortisol or related corticosteroids.
- Cushing's disease is Cushing's syndrome that results from excess pituitary production of adrenocorticotrophic hormone, usually secondary to a pituitary adenoma.
- Clinical manifestations include moon face with a plethoric appearance, truncal obesity with prominent supraclavicular and dorsal cervical fat pads (buffalo hump) and, usually, very slender distal extremities and fingers.
- Muscle wasting and weakness are present.
- The skin is thin and atrophic, with poor wound healing and easy bruising.
- Purple striae may appear on the abdomen.
- Hypertension, renal calculi, osteoporosis, glucose intolerance, reduced resistance to infection and mental disturbances are common.
- Cessation of linear growth is characteristic in children.
- Females usually have menstrual irregularities.
- In females with adrenal tumors, increased production of androgens may lead to hypertrichosis, temporal balding and other signs of virilism.

(233) (B) Give 2 liters normal saline with KCl at 20 mEq.

- The primary goal in the initial management of diabetic ketoacidosis is to restore intravascular volume and improve tissue perfusion.
- This will decrease insulin counter-regulatory hormone levels and glucose concentration in the blood.
- One approach is to start with 0.9% NaCl 1 to 2 liters bolus, followed by an infusion rate of 0.9% NaCl 500 ml/hour until the patient is hemodynamically stable.
- The rate is then decreased to 250 ml/hour and can be switched to half-normal saline to replace the large free water deficit.
- To prevent hypokalemia, it is recommended that potassium replacement occurs once serum levels fall below 5.5 mEq/L.
- Generally, 20-30 mEq potassium in each liter of fluid is sufficient to maintain the serum potassium within the range of 4.0-5.0 mEq/L.

(234) (D) Both A and B.

- In the general population, only 50% of people inherit a copy (allele) of the DR gene called DR3 and DR4 and less than 3% of the people have 2 alleles.
- However, at least one allele of DR3 or DR4 is found in 95% of Caucasians with diabetes mellitus type 1 and individuals with both DR3 and DR4 are particularly susceptible to diabetes mellitus type 1.
- 90-95% of young children with diabetes mellitus type 1 carry HLA-DR3, HLA-DR4, or both.
- Carriage of both haplotypes (e.g. DR3/DR4 heterozygotes) confers the highest susceptibility.
- Types of human leukocyte antigen:
 - DR2: Goodpasture's syndrome and multiple myeloma.
 - DR3: diabetes mellitus, systemic lupus erythematosus and graves' disease.
 - DR27: Ankylosing spondylitis and Reiter's syndrome.
 - B51: Behcet's disease.
 - DII: Hashimoto's disease.

(235) (A) Diabetes mellitus.

- A weakened or undeveloped immune system or metabolic illnesses such as diabetes are significant predisposing factors of candidiasis.
- There are several organism-specific factors that predispose diabetics to infection.
- Glucose-inducible proteins promote the adhesion of *Candida albicans* to buccal or vaginal epithelia.

This adhesion, in turn, impairs phagocytosis, giving the organism an advantage over the host.

- Vulvovaginal candidiasis is the most common form of mucosal candidiasis, it most often occurs in situations associated with increased estrogen levels, such as oral contraceptive use and pregnancy.
- Antibiotics, glucocorticoids, diabetes mellitus, HIV infection, intrauterine devices and diaphragm use are also risk factors.

(236) (A) Intubate, give 3% sodium, hydrocortisone and treat the hypothyroidism.

- Patients with hypothyroidism typically have a history of fatigue, weight gain, constipation and cold intolerance.
- Physicians should include hypothyroidism in the differential diagnosis of every patient with hyponatremia.
- Patients in a myxedema *coma* should be admitted to the intensive care unit and hypovolemia and electrolyte abnormalities corrected.
- Mechanical ventilation may be necessary.
- Cardiovascular status should be monitored carefully, especially after IV thyroid hormone replacement. Myocardial infarction must be ruled out and blood pressure stabilized.
- Because of the possibility of secondary hypothyroidism and associated hypopituitarism, hydrocortisone should be administered until adrenal insufficiency has been ruled out.

(237) (A) Diabetes mellitus.

- Diabetes is the most common cause of kidney failure.
- Even when diabetes is controlled, the disease can lead to chronic kidney disease and kidney failure.
- Most people with diabetes do not develop a chronic kidney disease that is severe enough to progress to kidney failure.
- People with kidney failure either undergo dialysis, an artificial blood-cleaning process, or transplantation to receive a healthy kidney from a donor.
- Hypertension, is a major factor in the development of kidney problems in people with diabetes.
- Both a family history of hypertension and the presence of hypertension appear to increase the risk of developing kidney disease.
- Hypertension also accelerates the progress of kidney disease when it already exists.

(238) (A) Hypertension and obesity.

- Systemic hypertension in the setting of diabetic nephropathy correlates well with the presence of retinopathy.
- Independently, hypertension also may complicate diabetes, in that it may result in hypertensive retinal vascular changes superimposed on the preexisting diabetic retinopathy, further compromising retinal blood flow.
- Proper management of hyperlipidemia (elevated serum lipids) may result in less retinal vessel leakage and hard exudate formation, but the reason behind this is unclear.

(239) (B) 12Months.

Ophthalmologic examination schedule for diabetes mellitus

Patient group	Recommended first examination	Minimum routine follow-up
DM 1	■ Within 5 years of diagnosis of diabetes once the patient is 10-year-old or older.	- Yearly.
DM-2	At the time of diagnosis of diabetes.	- Yearly.
Pregnancy in	• Prior to conception and during the first trimester, preexisting - Counsel on the risk of development and/or diabetes progression of retinopathy.	- Close follow-up throughout pregnancy and for one year postpartum.

(240) (A) Normal due to pregnancy.

- To meet the increased metabolic needs of a normal pregnancy, there are changes in thyroid physiology that are reflected in altered thyroid function tests.
- The major changes in thyroid function during pregnancy are an increase in serum thyroxine-binding globulin concentrations and stimulation of the TSH receptor by hCG.

(241) (A) Surgical resection.

- Surgery is the primary mode of therapy for patients with differentiated thyroid cancer.
- Total thyroidectomy is recommended if the primary tumor is at least 1-2 cm in diameter, or if extrathyroidal extension or metastases are present.
- This operation should be performed by an experienced thyroid surgeon to minimize the risk of hypoparathyroidism and recurrent laryngeal nerve injury.
- This more aggressive initial surgical approach is associated with lower rates of local and regional recurrence in most patients and overall mortality in high risk patients.

(242) (A) Primary hyperaldosteronism.

- Individuals with primary aldosteronism may present with hypokalemic metabolic alkalosis; however, as many as 38% of patients with aldosteronism may be normokalemic at presentation.
- Routine laboratory studies can show hyponatremia, hypokalemia and metabolic alkalosis resulting from the action of aldosterone on the distal tubule of the kidney (e.g. enhancing sodium reabsorption and potassium and hydrogen ion excretion).

(243) (C) After 5 years, then annually.

It is unusual for patients with diabetes mellitus type 1 under 30-year-old to develop retinopathy that requires specific ophthalmologic therapy earlier than 5 years after the onset of diabetes mellitus. Patients with diabetes mellitus type 1, no clinically significant retinopathy can be seen in the first years after the initial diagnosis of diabetes mellitus is made, but 10-15 years, 25-50% of patients show some signs of retinopathy.

Retinopathy prevalence increases to 75-95% after 15 years and approaches 100% after 30 years of diabetes mellitus.

Proliferative diabetic retinopathy is rare within the first decade of diabetes mellitus type 1 diagnosis but increases to 14-17% within 15 years, rising steadily thereafter.

Patients with diabetes mellitus type 2, an initial comprehensive examination by an ophthalmologist or optometrist is recommended shortly after the diagnosis of diabetes is made.

(244) (B) Hashimoto's thyroiditis.

Hashimoto's thyroiditis is chronic autoimmune inflammation of the thyroid with lymphocytic infiltration. Patients complain of painless enlargement of the thyroid or fullness in the throat.

Examination reveals a nontender goiter that is smooth or nodular, firm and more rubbery than the normal thyroid.

Many patients present with symptoms of hypothyroidism, but some present with hyperthyroidism. Investigations consist of measuring T4, TSH and thyroid autoantibodies. Early in the disease, T4 and levels are normal and there are high levels of thyroid peroxidase antibodies and less commonly antithyroglobulin antibodies.

Patients later develop hypothyroidism with decreased T4, decreased thyroid radioactive iodine uptake and increased TSH.

(245) (D) Addison disease.

Hypokalemia is a common clinical problem that can result from decreased intake, increased excretion into the cells, or, most often, increased losses of potassium from the gastrointestinal tract in the urine.

Loss of gastric or intestinal secretions from any cause (vomiting, diarrhea, laxatives, or tube drainage) is associated with potassium losses and possibly hypokalemia.

Hypokalemia due to lower gastrointestinal tract losses (usually from diarrhea) is typically associated with bicarbonate wasting and metabolic acidosis rather than the metabolic alkalosis observed with renal gastrointestinal losses.

Addison disease, abnormalities in serum electrolyte levels are observed, including low Na⁺ (<135 mEq/L), high K (>5 mEq/L), low HCO₃⁻ (15-20 mEq/L) and high BUN.

(246) (C) Parotid gland.

The major salivary glands are best examined by palpation and by observation of the salivary effluent during palpation.

On the parotid: gland and the submandibular glands can be examined in this way.

The parotid gland lies on the lateral surface of the mandibular ramus and folds itself around the posterior border of the mandible.

- It is generally soft and is not usually palpable as a discrete gland.
- The anterior border of the gland may be better defined by having the patient clench his or her teeth together, which tenses the masseter muscle.
- Around 40-100 lymph nodes are demonstrable in the dissection of the normal human neck; a few are always palpable through the skin in normal living adults.
- Normally the thyroid gland is palpable and rises along with thyroid and cricoid cartilage during swallowing, in persons with a slender neck.

(247) (C) Increased adrenocorticotrophic hormone from the adrenal gland.

- The hallmark biochemical feature of adrenocorticotrophic hormone dependent Cushing's syndrome is a normal or elevated adrenocorticotrophic hormone level, which reflects tumoral secretion.
- The tumor secretion of adrenocorticotrophic hormone causes bilateral adrenocortical hyperplasia and hyperfunction.
- The increased serum cortisol concentrations inhibit both hypothalamic corticotropin releasing hormone and vasopressin secretion, as well as adrenocorticotrophic hormone secretion by normal pituitary corticotrophs.
- While the term Cushing's syndrome denotes the clinical picture resulting from cortisol excess from any cause, Cushing's disease refers to hyperfunction of the adrenal cortex from pituitary adrenocorticotrophic hormone excess.
- Patients with Cushing's disease usually have a small adenoma of the pituitary gland.

(248) (D) Give him IM glucagon.

- As the main counter-regulatory hormone to insulin, glucagon is the first-line treatment for severe hypoglycemia in insulin-treated patients with diabetes
- Unlike dextrose, which must be administered IV by a qualified health care professional, glucagon can be administered by SC or IM injection by trained parents or caregivers.
- This can prevent the delay in commencing treatment that is otherwise experienced while waiting for the arrival of emergency personnel, reducing the need for hospitalization and providing reassurance for patients and their caregivers.

(249) (C) 6-7%.

- The recommended target glycosylated haemoglobin value should be lower than 7% for most patients.
- The goal should be set somewhat higher for older patients and those with comorbid conditions or a limited life expectancy in which the risk of hypoglycemia may outweigh the potential benefit.

(250) (C) SBP less than 130 mmHg and DBP less than 80 mmHg.

- Most guidelines for the treatment of hypertension recommend a blood pressure goal of <140/90 mmHg and a more aggressive goal of <130/80 mmHg for patients with diabetes mellitus.

(251) (A) Acromegaly.

- Gigantism and acromegaly are syndromes of excessive secretion of growth hormone (hypersomatotropism) that are nearly always due to a pituitary adenoma.
- Before closure of the epiphyses, the result is gigantism.
- Later, the result is acromegaly, which causes distinctive facial and other features.
- Diagnosis is clinical and by skull and hand x-rays and the measurement of growth hormone levels.
- Treatment involves removal or destruction of the responsible adenoma.
- Acromegaly is the clinical syndrome that results from the excessive secretion of growth hormone.

The mean age at diagnosis is 40-45-year-old.

the earliest clinical manifestations are coarsening of the facial features and soft tissue swelling of the hands and feet.

the patient's appearance changes and larger rings, gloves and shoes are needed.

The heart, liver, kidneys, spleen, thyroid, parathyroid glands and pancreas are larger than normal.

(252) (C) Reduce weight.

Evaluation of a patient with difficult-to-control hypertension should begin with an assessment of adherence to the prescribed management plan, including recommended lifestyle modifications. Patients may not appreciate the value of lifestyle modifications such as the dietary approaches to stop hypertension.

Explaining that the combination of the dietary approaches and low sodium intake can be as effective as single antihypertensive medication may help motivate patients, addition, a low sodium diet has been shown to reduce cardiovascular events, the importance of weight loss for overweight patients should also be stressed, their lifestyle modification recommendations include daily aerobic exercise (which has the added benefit of promoting weight loss) and moderation of alcohol intake.

(253) (A) T3.

T3 is 4 times more active than the more abundant T4.

The half-life of T3 is only 1 day, while the half-life of T4 is 5-7 days.

Approximately 99% of circulating thyroid hormone is bound to plasma protein and is metabolized primarily by the liver.

The main hormone secreted from the thyroid gland is T4, which is converted to T3 by deiodinase in the peripheral organs.

(254) (D) Evaluation of TSH and free T4 and follow up.

In areas of mild to moderate iodine deficiency, the prevalence of thyroid nodules during pregnancy averages between 3-21%.

A pregnant woman found to have a thyroid nodule should be evaluated in the same way as if she were not pregnant.

Thyroid function tests (TSH and free T4) and US analysis should be performed,

thyroid radionuclide scanning is contraindicated during pregnancy.

The indications for fine needle aspiration of the nodule are the same as in nonpregnant patients.

- Fine needle aspiration is safe to perform during pregnancy.

Subsequent management varies according to the biopsy results.

(255) (C) Hypokalemia.

- **Nonsuppressible primary hypersecretion of aldosterone is an underdiagnosed cause of hypertension.**
- **The classic presenting signs of primary aldosteronism are hypertension and hypokalemia.**
- **Hypokalemia is present in many patients with primary aldosteronism who are on an adequate sodium intake.**
- **Two factors contribute to the urinary potassium wasting in this setting: the hypersecretion of aldosterone, which directly promotes potassium secretion in the cortical collecting tubule and the adequate delivery of sodium and water to the distal secretory site.**
- **As an example, increasing sodium intake and, therefore, distal delivery will exacerbate the hypokalemia in this setting, since aldosterone secretion will not be appropriately suppressed by the volume expansion.**

(256) (C) Beta-blockers and propylthiouracil.

- **In many tissues, hyperthyroidism is associated with an increased number of beta-adrenergic receptors.**
- **The ensuing increase in beta-adrenergic activity is responsible for many of the symptoms associated with this disorder.**
- **It also explains the ability of beta-blockers to rapidly ameliorate many of the symptoms, including palpitations, tachycardia, tremulousness, anxiety and heat intolerance.**
- **Many of the neurologic and cardiovascular symptoms of thyrotoxicosis are relieved by beta-blockers therapy.**
- **Before such therapy is initiated, the patient should be examined for signs of dehydration that often occur with hyperthyroidism.**
- **After oral rehydration, beta-blockers therapy can be started.**
- **Beta-blockers therapy should not be administered to patients with a significant history of bronchial asthma.**
- **Anti-thyroid drugs (e.g. methimazole and propylthiouracil) have been used for hyperthyroidism.**
- **These medications are employed for the long term control of hyperthyroidism in children, adolescents and pregnant women.**
- **In adult men and non-pregnant women, they are used to control hyperthyroidism before definitive therapy with radioactive iodine.**

(257) (C) Pseudobulbar palsy.

- **Progressive pseudobulbar palsy affects mainly the muscles of the face, jaw and throat.**
- **Emotions may be changeable: people with progressive pseudobulbar palsy may switch from happiness to sadness quickly and without reason.**
- **Inappropriate emotional outbursts are common**

(258) (D) TSH.

Thyroid hormone has important effects on cardiac muscle, the peripheral circulation and the sympathetic nervous system that alter cardiovascular hemodynamics in a predictable way in patients with hyperthyroidism.

- Cardiovascular symptoms are common in patients with hyperthyroidism.
- Some actions of T₃ on the heart produce clinical findings similar to those of beta-adrenergic stimulation. Hyperthyroidism predictably increases heart rate and cardiac contractility.
- Virtually all measures of cardiac function, including left ventricular ejection fraction, the rate of ventricular pressure development, diastolic relaxation and cardiac output, are increased.

(259) (B) Subacute thyroiditis.

Subacute thyroiditis (subacute granulomatous thyroiditis) is characterized by neck pain or discomfort, a tender diffuse goiter and a predictable course of thyroid function evolution.

Thyroiditis is defined as inflammation of the thyroid gland.

Common types are subacute granulomatous, radiation, lymphocytic, postpartum and drug-induced amiodarone thyroiditis.

Signs and symptoms in subacute and radiation thyroiditis presents with tender thyroid, malaise and upper respiratory tract infection symptoms.

- Diagnosis of this condition is dependent on thyroid dysfunction (typically hyperthyroidism followed by hypothyroidism), with decreased uptake on a radioactive iodine uptake test.
- Treatment involves the administration of beta-blockers for hyperthyroidism; levothyroxine for hypothyroidism and anti-inflammatory medication.

(260) (C) Dexamethasone suppression test.

The possible presence of Cushing's syndrome is suggested by certain signs and symptoms.

- Unfortunately, none of these are pathognomonic and many are nonspecific (e.g. obesity, hypertension, menstrual irregularity and glucose intolerance).
- As a result, the diagnosis must be confirmed by biochemical tests.

Biochemical confirmation of Cushing's syndrome has relied upon the measurement of urinary free cortisol over a 24 hours period and low dose dexamethasone suppression testing.

Low-dose dexamethasone suppression testing, especially the 1 mg overnight test, has been the mainstay of biochemical screening and is recommended in most standard texts.

(261) (A) Mucormycosis.

Immunocompromising conditions are the main risk factor for mucormycosis.

- Patients with uncontrolled diabetes mellitus, especially with ketoacidosis, are at high risk.

When spores are deposited in the nasal turbinates, rhinocerebral disease develops.

Most patients with rhinocerebral disease have diabetes mellitus (especially with ketoacidosis).

Rhinocerebral mucormycosis may manifest as unilateral, retro-orbital headache, facial pain, numbness, fever, hyposmia and nasal stuffiness, which progresses to black discharge, initially, mucormycosis may mimic sinusitis.

(262) (A) Hyperthyroidism.

- Hyperthyroidism is characterized by hypermetabolism and elevated serum levels of free thyroid hormone
- There are many symptoms, including tachycardia, fatigue, weight loss, nervousness and tremor.
- Diagnosis is made by clinical signs and symptoms and with thyroid function tests.
- Treatment depends on the cause

(263) (A) Insulin mismanagement

- The absence of insulin, the primary anabolic hormone means that tissues such as muscle, fat and liver do not take up glucose.
 - Counter regulatory hormones, such as glucagon, growth hormone and catecholamines, enhance triglyceride breakdown into free fatty acids and gluconeogenesis, which is the main cause for the elevation in serum glucose level in diabetic ketoacidosis.
 - Beta-oxidation of these free fatty acids leads to increased formation of ketone bodies
- The most common scenarios for diabetic ketoacidosis are underlying or concomitant infection (40%), missed insulin treatments (25%) and newly diagnosed previously undiagnosed diabetes (15%).

(264) (B) Increase in testicular size.

- The earliest stage of male maturation which has a mean duration of 6 months is an increase in testicular size.
 - Almost all boys have an increase in testicular volume (> 1 cc) prior to the appearance of penile growth and pubic hair.
- Thus if one considers only pub hair in the assessment of early male puberty, misclassification and unnecessary testing may result.
- The appearance of sperm in the urine and the onset of nocturnal sperm emissions occur shortly after the attainment of peak height velocity, many consider these events the male equivalent of menarche.

(265) (C) Increase in long-acting insulin dose.

- An elevated blood glucose level before breakfast needs to increase pre-dinner or pre-bed intermediate or long-acting insulin.
- Blood glucose tests during the night might ensure that this change does not result in nocturnal hypoglycemia.

(266) (A) Biofeedback.

Biofeedback is a treatment technique in which people are trained to improve their health by using signals from their own bodies.

It may be used to improve health, performance and the physiological changes that often occur in conjunction with changes to thoughts, emotions and behavior.

(267) (C) 100% oxygen.

- During the onset of a cluster headache, many people respond to the inhalation of 100% oxygen therapy (12-15 liters/min in a non-re-breathing mask).
- Some people have found better results with 25 liters/min.
- When oxygen is used at the onset the attack can be aborted in as little as 1 minute or as long as 10 minutes.
- Once an attack is at its peak, oxygen therapy appears to have little effect so many people keep an oxygen tank close at hand to use at the very first sign of an attack.

Hyperbaric oxygen therapy has been used successfully in treating cluster headaches though it was not shown to be more successful than surface-pressure oxygen.

(268) (A) Multiple sclerosis.

multiple sclerosis, patients present with multiple neurologic complaints that are separated in time and space and are not explained by a single lesion, as the disease progresses, permanent deficits may accumulate.

Limb weakness, optic neuritis, paresthesia, diplopia, vertigo, nystagmus, gait unsteadiness, urinary retention, sexual and bowel dysfunction, depression and cognitive impairment are also seen.

CSF reveals mononuclear pleocytosis (>5 cells/pl) and an increase IgG index, or oligoclonal bands (nonspecific).

(269) (E) Decreased level of consciousness.

The earliest sign of increased intracranial pressure is a change in the level of consciousness symptoms include restlessness, confusion and drowsiness).

the early signs are headache, nausea, vomiting and pupil diameter changes.

Late signs of intracranial pressure are bradycardia, hypertension and bradypnea (Cushing's triad).

(270) (B) Tissue plasminogen activator.

stroke, or cerebrovascular accident, is characterized by the sudden loss of blood circulation to an area of the brain, resulting in a corresponding loss of neurologic function, strokes are classified as either hemorrhagic or ischemic.

- acute ischemic stroke refers to strokes caused by thrombosis or embolism and is more common than hemorrhagic stroke.

current treatments for acute ischemic stroke include IV thrombolytic therapy with tissue-type plasminogen activator and endovascular therapies, including intra-arterial thrombolytic therapy and use of clot retrieval devices.

surgical management with hemispheric decompression in patients with middle cerebral artery territory infarction and associated life-threatening parenchymal edema has also been supported.

Tissue plasminogen activator is administered within 3 hours of symptoms onset (if no contraindication).

Aspirin: use within 48 hours of ischemic stroke to reduce risk of death.

- Clopidogrel: can be used in acute ischemic stroke.
- Heparin and other anticoagulants: can be used in patient who has high risk of DVT or atrial fibrillation.

(271) (A) Neisseria meningitides.

- Bacterial meningitis classically presents with the triad of headache, high fever and nuchal rigidity.
- Meningitis caused by the bacteria *Neisseria meningitidis* can be differentiated from meningitis of other causes by a rapidly spreading petechial rash, which may precede other symptoms.
- The rash consists of numerous small, irregular purple or red spots (petechiae) on the trunk, lower extremities, mucous membranes, conjunctiva and (occasionally) the palms of the hands or soles of the feet.
- CSF glucose is low in bacterial, mycobacterial and fungal infections.
- The three most common etiologic agents of bacterial meningitis are *Haemophilus influenzae* at 6% of cases, *Neisseria meningitidis* at 10% and *Streptococcus pneumoniae* at 26%.

(272) (A) Cluster headache.

- Males are affected by cluster headaches more often than females and the average age of onset is 25-year-old.
- Patients present with a brief, excruciating, unilateral periorbital headache that lasts 30 minutes to 3 hours, during which the patient tends to be extremely restless.
- Attacks tend to occur in clusters, affecting the same part of the head at the same time of day (commonly during sleep) and in a certain season of the year.
- Associated symptoms include ipsilateral lacrimation of the eye, conjunctival injection, Homer's syndrome and nasal stuffiness.
- Diagnosis: classic presentations with a history of repeated attacks over an extended period of time require no evaluation.
- First episodes require a workup to exclude disorders associated with Horner's syndrome (e.g. carotid artery dissection or cavernous sinus infection).
- Treatment: acute therapy: high-flow oxygen (100% non-rebreather), dihydroergotamine, octreotide, sumatriptan or zolmitriptan.
- Prophylactic therapy: transitional therapy includes prednisone and ergotamine and maintenance therapy includes verapamil, methysergide, lithium, valproic acid and topiramate.

(273) (D) Cerebellum.

- The cerebellum coordinates voluntary movements such as posture, balance, coordination and speech, resulting in smooth, balanced muscular activity.
- It is also important for learning motor behaviors.
- It is a relatively small portion of the brain, about 10% of the total weight, but it contains half the brain's neurons.
- Damage to the cerebellum, while not causing paralysis or intellectual impairment, would contribute to a lack of balance, slower movements and tremors.
- Complex physical tasks would become unsteady and halting.

(274) (C) Tension headache.

Tension headaches are considered by some to be a milder form of migraine headache.

- They are more common in females than in males.

Patients usually present with a tight, band-like pain that is not associated with sensory phobia, nausea, vomiting, or auras and is brought on by fatigue or stress.

- Nonspecific symptoms (e.g. anxiety, poor concentration, difficulty sleeping) may also be seen.
- May be generalized or most intense in the frontal, occipital and neck regions.

It is

- It is diagnosed by exclusion of other differential diagnosis.

Treatment is: relaxation, massage, hot baths and avoidance of exacerbating factors.

- NSAIDs and acetaminophen are first-line abortive therapies, but triptans may also be considered.

(275) (B) Ascending paralysis starting from the lower limbs.

- Guillain-Barre syndrome is an acute polyneuropathy affecting the peripheral nervous system.

Ascending paralysis and weakness beginning in the feet and hands and migrating towards the trunk, is the most typical symptom and some subtypes cause changes in sensation or pain as well as dysautonomia.

- It can cause life-threatening complications, in particular if the muscles of respiration are affected or if autonomic system involvement.

(276) (A) ABC of CPR to secure airway.

- When an individual is brought to the ER during or following a grand mal seizure, the airway and circulation must first be protected and then any associated injuries or medical problems (e.g. stroke, drug overdose or withdrawal, infection, or complications of diabetes) must be treated.

Individuals with a history of self-injury

- CPR may be needed in some cases.
- If the seizure is ongoing, a thiamine and sugar solution (glucose) should be given IV.
- Both vitamin B12 deficiency and low blood sugar (hypoglycemia) can cause grand mal seizure and are easily treated with no side effects.
- An individual with ongoing grand mal seizures is treated with anticonvulsant drugs, either individually or in combination.

(277) (B) Occipital lobe.

The occipital lobe is responsible for the perception of the visual world: brain containing most of the Visual cortex, the primary visual cortex is the first cortical area to receive visual information. It can range from visual hallucinations to cortical blindness.

(278) (C) Lymphocytosis.

Acute meningitis is also often referred to as viral meningitis

Bacterial meningitis is a clinical syndrome characterized by a predominance of lymphocytes in CSF and no bacteria are identified in the CSF

Analysis of CSF shows a predominance of lymphocytic pleocytosis usually less than 1000 cells/cc

Normal protein level and normal glucose level.

Approximately 20-75% of patients with viral meningitis have neutrophil predominance in the

CSF specimen obtained especially in enterovirus, mumps and arbovirus infections.

A repeat lumbar puncture within 8-12 hours frequently shows a change from neutrophil to lymphocyte predominance, with the remainder taking place in 24-48 hours.

(279) (A) Orthostatic hypotension.

- Pure autonomic failure, also known as Bradbury-Eggleston syndrome or idiopathic orthostatic hypotension, is a form of dysautonomia that first occurs in middle-aged patients or later in life: men are affected more often than women.
- it is one of three diseases classified as primary autonomic failure.
- It is a degenerative disease of the autonomic nervous system and symptoms include dizziness and fainting (caused by orthostatic hypotension), visual disturbances and neck pain.
- Chest pain, fatigue (physical) and sexual dysfunction are less common symptoms that may also occur.
- Symptoms are worse when standing; sometimes one may relieve symptoms by lying down.

(280) (B) Heat exhaustion.

ex USt ion:

- Heat exhaustion is one part of the spectrum of heat related illness that begin with heat cramps, progress to heat exhaustion and finally to heat stroke.
- Heat exhaustion often occurs when people are exposed to high temperatures, especially when combined with strenuous physical activities and humidity.
- Body fluids are lost through sweating, causing dehydration in adults and overheating of the body.
- The temperature may be elevated, but not above 40°C.

2- Heat stroke:

- Heat stroke, also referred to as sun stroke, is a life-threatening medical condition in which the body temperature may reach 40.5°C or greater within minutes.
- Heat stroke symptoms include heavy sweating, rapid breathing, rapid and weak pulse, dry skin and dizziness.
- The body's cooling system, which is controlled by the brain, stops working and the internal body temperature rises to the point at which brain damage or damage to other internal organs may result.
- Heat rash due to skin irritation from excessive sweating.

(281) (A) Migraine.

- Migraine headaches affect females more often than males and may be familial.
- Auras may occur with or without the pain of migraine headache.
- Onset usually occurs when the patient is in their early 20s.
- Patients usually present with a throbbing headache (>2 hours but usually <24 hours and almost always < 72 hours in duration) that is associated with nausea, vomiting, photophobia and noise sensitivity.
- Headache is usually relieved by sleep and darkness.

(282) (C) Loss of dorsiflexion compartment of the foot (foot drop).

Lumbar nerve root entrapment - signs and symptoms

Nerve root	Sensory changes	Reflex loss	Weakness	Usual disc prolapsed
L2	- Front of thigh.	- None.	- Hip flexion and adduction.	- L2/3.
L3	- Inner thigh and knee.	- Knee.	- Knee extension.	
L4	- Inner calf.	- Knee.	- Knee extension.	- L3/4.
L5	- Outer calf. - Upper and inner foot	- None.	- Inversion of foot. - Dorsiflexion of toes.	- L4/5.
S1	- Posterior calf. - Lateral border of foot.	- Ankle.	- Plantar flexion of foot.	- L5/S1.

(283) (D) Median nerve injury and loss of thumb opposition.

Lacerations of the wrist often cause median nerve injury because this nerve is relatively close to the surface.

(284) (C) Between L3-L4.

Lumbar puncture is a procedure that is often performed in the ER to obtain information about CSF. Although usually used for diagnostic purposes to rule out potentially life-threatening conditions (e.g. pediatric bacterial meningitis or subarachnoid Hemorrhage), it is also sometimes used for therapeutic purposes (e.g. treatment of idiopathic intracranial hypertension).

CSF fluid analysis can also aid in the diagnosis of various other conditions (e.g. demyelinating diseases and carcinomatous meningitis).

- This procedure is done between L3-L4 because in about 94% of individuals the spinal cord ends at the level of the L1 vertebra.

The L3-L4 interspace or below is therefore the safest position for this procedure.

(285) (B) Elevated blood pressure.

- Hypertension is the most important modifiable risk factor for stroke and intracerebral hemorrhage and the risk of stroke increases progressively with increasing blood pressure, independent of other factors.

Modifiable risk factors include: obesity, atrial fibrillation, carotid stenosis, hypercholesterolemia, smoking, hypertension, diabetes mellitus and drug use (cocaine or IV drugs).

- Non modifiable risk factors are: family history of myocardial infarction or stroke, age over 60-year-old, male gender and African-American, Hispanic, or Asian ethnicity.

(286) (C) Anticonvulsant drugs are not needed if the patient has seizures.

- Anticonvulsants prevent seizure recurrence and terminate clinical and electrical seizure activity.

- These agents are used routinely to avoid seizures that may be induced by cortical damage.

- Guidelines for management of spontaneous intracranial hemorrhage and treatment with antiepileptic drugs are indicated for those patients with clinical seizures or with EEG seizure activity accompanied by a change in mental status.

- Prophylactic use of anticonvulsants is controversial and should be used judiciously, if at all.

(287) (A) Dorsal column.

- The Romberg test is a test of the body's sense of positioning (proprioception), which requires healthy functioning of the dorsal columns of the spinal cord.

(288) (B) Tremors.

- This is a case of Parkinson's disease.
- Clinical diagnosis requires the presence of 2 of 3 cardinal signs: resting tremor, rigidity, or bradykinesia.
- The most common initial finding is an asymmetric resting tremor in an upper extremity.

(289) (C) Sodium valproate.

- Sodium valproate is a type of anticonvulsant.
- It belongs to category of valproic acid drugs.
- It is a broad spectrum anticonvulsant, producing little sedation or other central effects.
- Its chief side effects are weight gain, edema, fulminate hepatitis, anorexia, vomiting, drowsiness, ataxia, tremor, transient loss of hair, increased blood ammonia, rashes and thrombocytopenia.
- Phenytoin side effects: gingival hyperplasia, hirsutism and ataxia.
- Carbamazepine side effects: agranulocytosis, hepatotoxicity and aplastic anemia.

(290) (A) Carbamazepine.

- This is a case of trigeminal neuralgia.
- The goal of pharmacologic therapy is to reduce pain.
- Carbamazepine is regarded by most as the medical treatment of choice.
- Some advocate a trial of baclofen since it has fewer adverse effects.
- Oxcarbazepine may be better tolerated.
- The synergistic combination of carbamazepine and baclofen may provide relief from episodic pain though convincing clinical evidence is weak at best.
- The anticonvulsant carbamazepine is the first line treatment.
- Second line medications include baclofen, lamotrigine, oxcarbazepine, phenytoin, gabapentin, pregabalin and sodium valproate.
- Uncontrolled trials have suggested that clonazepam and lidocaine may be effective.

(291) (D) Tonic-clonic convulsion.

- Extrapyrasidal symptoms, such as akathisia, dystonia, psuedoparkinsonism and dyskinesia, are drug-induced side effects that can be problematic for persons who receive antipsychotic medications or other dopamine-blocking agents.
- The clinical manifestations include a number of atypical involuntary muscle contractions that

(292) (B) Hypertension.

The most common cause of spontaneous intracerebral hemorrhage is hypertension.

Chronically high blood pressure can weaken the walls of arteries, particularly deep in the brain where small vessels branch off of larger arteries.

When high pressure pushes against those weak blood vessel walls, the artery can burst.

nee hypertension by itself often causes no symptoms, many people with intracranial hemorrhage are < o aware that they have high blood pressure, or that it needs to be treated.

- Less common causes of intracerebral hemorrhage include trauma, infections, tumors, blood clotting deficiencies and abnormalities in blood vessels (such as arteriovenous malformations).

(293) (C) Rupture of a cerebral aneurysm.

subarachnoid hemorrhage is bleeding into the subarachnoid space.

e subarachnoid space is the area between the arachnoid (brain) and the pia mater surrounding the man brain.

his may occur spontaneously, usually from a ruptured cerebral aneurysm, or may result from head lji igy.

85% of cases of spontaneous subarachnoid hemorrhage, the cause is rupture of a cerebral aneurysm, rebral aneurysm is a weakness in the wall of one of the artery in the brain that becomes enlarged, hey tend to be located in the circle of Willis and its branches.

hile most cases of subarachnoid hemorrhage are due to bleeding from small aneurysms, larger . euryms which are less common are more likely to rupture.

(294) (A) Nitrofurantoin

ms is a case of urinary tract infection.

ternative therapies in the presence of sulfa allergy or where E. coli Trimethoprim-sulfamethoxazole es stance rates exceed 20% is a fluoroquinolone or nitrofurantoin.

(295) (A) Interstitial cystitis.

terstitial cystitis is a syndrome characterized by urinary urgency and frequency, usually with pelvic a n and nocturia, in the absence of bacterial infection or any other identifiable pathology.

is a diagnosis of exclusion of unknown cause characterized by bladder pain.

It may be associated with urinary urgency, urinary frequency, nocturia *and* sterile urine cultures.

nose with interstitial cystitis may have symptoms that overlap with other urinary bladder disorders uch as urinary tract infection, overactive bladder, urethritis, urethral syndrome and prostatitis.

(296) (A) Creatinine clearance.

Renal function, in nephrology, is an indication of the state of the kidney and its role in renal physiology, ne creatinine clearance test compares the level of creatinine in urine with the creatinine level in the lood.

eatinine is a breakdown product of creatine, which is an important part of muscle.

The test helps provide information on kidney function.

(297) (A) RBCs cast in urine.

- Urinalysis and sediment examination are crucial in the evaluation of patients with acute nephritic syndrome.
- In some instances, marked sterile pyuria is present.
- The presence of RBCs casts is almost pathognomonic of glomerulonephritis.

(298) (C) Polycystic kidney disease.

- Autosomal dominant polycystic kidney disease is a multisystem and progressive disorder characterized by cyst formation and enlargement of the kidney and other organs (e.g. liver, pancreas and spleen).
- Signs and symptoms: pain in the abdomen, flank, or back is the most common initial complaint and it is almost universally present in patients with autosomal dominant polycystic kidney disease.
- Dull aching and an uncomfortable sensation of heaviness may result from a large polycystic liver.
- Examination in patients with autosomal dominant polycystic kidney disease may demonstrate the following: hypertension, palpable, bilateral flank masses, nodular hepatomegaly and, rarely, symptoms related to renal failure (e.g. pallor, uremic fetor, dry skin and edema).

(299) (C) Iron.

- Iron can be obtained from chickpeas (e.g. in hummus), lentils, navy beans, pinto beans, kidney beans, soybeans, quinoa, tofu, raisins, goji berries, fortified vegan burgers, soy products, pumpkin seeds, cashews, figs, sunflower seeds, sesame tahini, prunes, whole wheat parsley and pine nuts.

(300) (C) Lung hemorrhage and glomerulonephritis.

- Goodpasture's syndrome is an uncommon and life-threatening hypersensitivity disorder believed to be an autoimmune disorder process related to antibody formation in the body.
- Goodpasture's syndrome is characterized by glomerulonephritis and lung hemorrhage.
- The exact cause is unknown.
- Sometimes the disorder is triggered by a viral infection or by the inhalation of gasoline or other hydrocarbon solvents.
- An association also exists between cigarette smoking and the syndrome.
- The target antigen of the Goodpasture's antibodies has been localized to type IV collagen.

(301) (A) Bilateral renal artery stenosis.

In renal artery stenosis, renal perfusion pressure is reduced and nephron transit time is prolonged on the side of the stenosis; salt and water reabsorption is therefore increased.

- As a result, urine from the ischaemic kidney is more concentrated and has a lower sodium concentration than urine from the contralateral kidney.
- Creatinine clearance is decreased on the ischaemic side.
- Patients with documented or possible renovascular hypertension may experience progressive azotemia as a consequence of the renal ischemia and/or the persistence of significant hypertension.
- Refractory hypertension (e.g. poor control of blood pressure despite treatment with 3 or more antihypertensive agents) may occur.

(302) (B) The development of pharyngitis/tonsillitis.

- Acute rheumatic fever is an autoimmune inflammatory process that develops as a consequence of streptococcal infection.
- Acute rheumatic fever has extremely variable manifestations and remains a clinical syndrome for which no specific diagnostic test exists.
- Persons who have experienced an episode of acute rheumatic fever are predisposed to recurrence following subsequent (rheumatogenic) group A streptococcal infections.
- Acute rheumatic fever is characterized by nonsuppurative inflammatory lesions of the joints, heart, subcutaneous tissue and central nervous system.
- Rheumatic fever follows pharyngeal infection with rheumatogenic group A streptococcus.
- The risk of developing rheumatic fever after an episode of streptococcal pharyngitis has been estimated at 0.3-3%.

(303) (D) Fever.

Modified Jones criteria for a first episode of acute rheumatic fever:

- 1- Major criteria: carditis, chorea, erythema marginatum, polyarthritides and subcutaneous nodules.
 - 2- Minor criteria: arthralgia, elevated ESR or CRP, fever and prolonged PR interval on ECG.
- Diagnosis of acute rheumatic fever requires 2 major or 1 major and 2 minor manifestations and evidence of group A streptococcal infection; e.g. elevated or rising antistreptococcal antibody titer (e.g. antistreptolysin O, anti-DNase B), positive throat culture, or positive rapid antigen test.

(304) (A) Amphotericin B.

- A compound of pentamidine and amphotericin B is used as a second line for treatment of Leishmania.

(305) (C) Metronidazole.

- Giardia intestinalis is a flagellate that is found world-wide.
- It causes small intestinal disease (giardiasis), with diarrhea and malabsorption.
- A 2 gm of metronidazole given as a single dose on 3 successive days will cure the majority of infections, although sometimes a second or third course is necessary.
- Alternative drugs include tinidazole, mepacrine and albendazole.

(306) (A) Infectious mononucleosis.

- Tests for Epstein Barr virus antibodies are used to help diagnose infectious mononucleosis.
- Cervical lymphadenopathy and hepatosplenomegaly are signs of infectious mononucleosis.

(307) (A) Kaposi sarcoma.

- Kaposi sarcoma is a spindle cell tumor thought to be derived from endothelial cell lineage.
- AIDS-related Kaposi sarcoma, unlike other forms of the disease, tends to have an aggressive clinical course.
- Lesions in Kaposi sarcoma may involve the skin, oral mucosa, lymph nodes and visceral organs.
- Most patients present with cutaneous disease.

(308) (A) Plasmodium falciparum.

- In humans, malaria is caused by *Plasmodium falciparum*, *Plasmodium malariae*, *Plasmodium ovale*, *Plasmodium vivax* and *Plasmodium knowlesi*.
- *Plasmodium falciparum* is the most common species identified among infected individuals (~75%), followed by *Plasmodium vivax* (~20%).

1- In Plasmodium vivax or Plasmodium ovale infection:

- The illness is relatively mild.
- Anemia develops slowly and there may be tender hepatosplenomegaly.
- Spontaneous recovery usually occurs within 2-6 weeks, but hypnozoites in the liver can cause relapses for many years after infection.
- Repeated infections often cause chronic ill health due to anemia and hyperreactive splenomegaly.

2- Plasmodium malariae infection:

- This also causes a relatively mild illness, but tends to run a more chronic course.
- Parasitaemia may persist for years, with or without symptoms.
- In children. *Plasmodium malariae* infection is associated with glomerulonephritis and nephrotic syndrome.

3- Plasmodium falciparum infection:

- This causes, in many cases, a self-limiting illness similar to the other types of malaria, although the paroxysms of fever are usually less marked.
- However it may also cause serious complications and the vast majority of malaria deaths are due to *Plasmodium falciparum*.
- Patients can deteriorate rapidly and children, in particular, progress from reasonable health to coma and death within hours.
- A high parasitaemia (1% of red cells infected) is an indicator of severe disease, although patients with apparently low parasite levels may also develop complications.
- Cerebral malaria is marked by diminished consciousness, confusion and convulsions, often progressing to coma and death.
- If untreated, malaria is universally fatal.
- Black water fever is due to widespread intravascular hemolysis, affecting both parasitized and unparasitized red cells, giving rise to dark urine.

(309) (C) Fluorescent treponemal antibody absorption.

- A fluorescent treponemal antibody absorption test checks for antibodies to the bacteria that cause syphilis and can be used to detect syphilis after the first 3-4 weeks following exposure to syphilis bacteria.
- The test can be done on a sample of blood or spinal fluid.

(310) (C) Tetracycline.

- *Vibrio cholera* can be life threatening, but it is easily prevented and treated.

(311) (C) 150 mg/kg of aspirin will not result in aspirin toxicity.

Toxicity dose of aspirin:

Dose < 125mg/kg minimal risk of toxicity, dose > 150mg/kg will mild toxicity.

Dose 150-300 mg/kg moderate toxicity.

Dose 300-500 mg/kg severe and prolonged.

Dose > 500 mg/kg potentially lethal.

(312) (A) Low molecular weight heparin.

Low molecular weight heparin is prepared by selectively treating unfractionated heparin to isolate the low molecular weight (< 9,000 dalton) fragments.

Activities measured in units of factor X inactivation and monitoring of the aPTT is not required.

(313) (A) Epinephrine.

Epinephrine maintains blood pressure, antagonizes the effects of the released mediators and inhibits their release of mediators.

The standard treatment for anaphylaxis should also include antihistamines and corticosteroids.

However antihistamines have a much slower onset of action than epinephrine; they exert a minimal effect on blood pressure and they should not be administered alone as treatment. Antihistamine therapy is thus considered adjunctive to epinephrine, corticosteroids have no immediate effect on anaphylaxis.

However they should be administered early to prevent a potential late phase reaction.

(314) (A) Atropine.

In cases of organophosphorus insecticide toxicity require no specific treatment other than the removal of soiled clothing.

Contaminated skin should be washed with soap and water to prevent further absorption.

2 mg of atropine should be given IV to reduce bronchorrhoea.

In addition a 2 (e.g. pralidoxime mesilate 30 mg/kg by slow IV injection 4-hourly or an infusion of pralidoxime mesilate 8-10 mg/kg/hour), which reacts with phosphorylated acetylcholinesterase, should be given in symptomatic patients where the diagnosis has been confirmed.

Atropine is initiated in patients with organophosphorus insecticide toxicity who present with muscarinic symptoms.

Atropine acts on autonomic postganglionic cholinergic receptors, including receptors found in the gastrointestinal and pulmonary smooth muscle, exocrine glands, heart and eye. The endpoint for atropinization is dried pulmonary secretions and adequate oxygenation.

Tachycardia and mydriasis must not be used to limit or to stop subsequent doses of atropine.

The main concern with organophosphorus toxicity is respiratory failure from excessive airway secretions.

(315) (A) Beriberi.

Vitamin B12 (cobalamin) deficiency leads to pernicious anemia.

> Vitamin C (ascorbic acid) deficiency leads to scurvy, Vitamin B3 (niacin) deficiency leads to pellagra.

(316) (D) Supportive treatment.

- A monospot test used for the diagnosis of infectious mononucleosis.
- Infectious mononucleosis is often called the kissing disease.
- The virus that causes mono is transmitted through saliva.
- The cause of mononucleosis is the Epstein Barr virus.
- Enlargement of spleen is a serious complication of mononucleosis.
- There is no specific therapy available to treat infectious mononucleosis.
- Antibiotics do not work against viral infections such as mono.
- Treatment mainly involves bed rest and drinking plenty of fluids (supportive treatment).

(317) (B) Urinary tract.

- These infections may be local or systemic and include urinary tract infection, abdominal infections, wound infections, bacteremia and endocarditis.

(318) (D) Heart rate.

- Factitious fever is produced artificially by a patient.
- This is done by artificially heating the thermometer or by self-administered pyrogenic substances.
- An artificial fever may be suspected if the pulse rate is much less than expected for the degree of fever noted.

This diagnosis should be considered in all patients in whom there is no other plausible explanation for the fever.

- Patients who pretend to have fevers may have serious psychiatric problems.

(319) (B) Metronidazole.

- The organism which causes peritonitis is bacteroides fragilis.
- Metronidazole is broad spectrum antibiotic for bacteroides fragilis.

(320) (A) Chronic leg ischemia.

- Leg pain aggravated by walking and relieved by rest (claudication), hair loss and coldness are signs of limb ischemia.

(321) (A) Losartan.

- Losartan and lisinopril caused similar hypotensive effects.
- Lisinopril, but not losartan, was found to increase a cough response induced by both mechanical and chemical stimulation.
- The specific selective angiotensin \square receptor blockers losartan does not cause cough in patients with a previous angiotensin converting enzyme inhibitors cough.
- Angiotensin converting enzyme inhibitors cough is likely to be related to kininase II inhibiting action.

(322) (A) Herpes zoster virus infection.

- Skin changes over the back (vesicles) forming a tight chain like pattern from the back to the abdomen is characteristic of herpes zoster virus infection.

(323) (B) Tetracycline and aluminum hydroxide.

- Using aluminum hydroxide together with tetracycline may decrease the effects of tetracycline.
- Administration of tetracycline and aluminum hydroxide should be separated by 2-3 hours.

(324) (A) Boiling of water.

- *Entamoeba histolytica* is a protozoan which causes a disease known as amoebic dysentery.
- This protozoan can also cause abscesses in the liver.
- The organism exists both as a motile trophozoite and as a cyst that can survive outside the body.

Cysts are transmitted by the ingestion of contaminated food or water, or are spread directly by person-to-person contact.

Trophozoites emerge from the cysts in the small intestine and then pass on to the colon, where they multiply.

Amoebiasis is difficult to eradicate because of the substantial human reservoir of infection.

- The only progress will be through improved standards of hygiene, sanitation and better access to clean water.

Cysts are destroyed by boiling, but chlorine and iodine sterilizing tablets are not always effective.

(325) (A) Biopsy from temporal arteritis.

- A temporal artery biopsy from the affected side is the definitive diagnostic test for giant cell arthritis.
- The lesions are patchy and the whole length of the biopsy (> 1 cm long) must be examined; even so, negative biopsies occur.
- The histological features of giant cell arthritis include intimal hypertrophy.
- Inflammation of the intima and sub-intima breaking up of the internal elastic lamina.
- Presence of giant cells, lymphocytes and plasma cells in the internal elastic lamina.

(326) (A) Ibuprofen.

- Usually, ibuprofen can be used every 12 hours while the other three drugs used every 4-6 hours.

(327) (D) Pasturization of dairy products.

- Avoid unpasteurized dairy foods, cook meat thoroughly and vaccinate domestic animals.

(328) (A) Ceftriaxone.

- Single-dose oral therapy with cefixime (400 mg), ceftriaxone IM (250 mg) or 2 gm of spectinomycin IM successfully treats uncomplicated anogenital infection.
- Single-dose oral amoxicillin 3 gm with probenecid 1 g, ciprofloxacin (500 mg) or ofloxacin (400 mg) may be used in areas with a low prevalence of antibiotic resistance.
- Longer courses of antibiotics are required for complicated infections.
- There should be at least one follow-up assessment and culture tests should be repeated at least 72 hours after treatment is complete.
- All sexual contacts should be notified and then examined and treated as necessary.

(329) (D) Haloperidol.

- Multidrug therapy is essential to treat leprosy because of developing drug resistance.
- Much shorter courses of treatment are now being used but longer therapy may be required in severe cases.
- Follow up including skin smears is obligatory.
- Leprosy should be treated in specialist centers with adequate physiotherapy and occupational therapy support
- Surgery and physiotherapy also play a role in the management of trophic ulcers and deformities of

Recommended treatment regimens for leprosy in adults

Multibacillary leprosy (lepromatous, borderline lepromatous, borderline)	- Rifampidin	600	mg	once-monthly, supervised.
	- Clofazimine	300	mg	once-monthly, supervised.
	- Clofazimine	50	mg	daily, self-administered.
	- Dapsone	100	mg	daily, self-administered.
Pauobacillary leprosy (borderline tuberculoid, tuberculoid)	- Treatment continued for 12 months.			
	- Rifampicin	600	mg	once-monthly, supervised.
	- Dapsone	100	mg	daily, self-administered.
	- Treatment continued for 6 months.			
	- Rifampicin	600	mg	as a single dose

(330) (C) Intubation.

- Damage to the brain may result in a altered level of consciousness.
- When this becomes severe to the point of stupor or coma (defined as a score on the Glasgow coma scale of less than 8), dynamic collapse of the extrinsic muscle associated with the larynx can obstruct the airway, impeding the free flow of air into the lungs.
- Furthermore, protective airway reflexes such as cough and swallowing may be diminished or absent.
- Tracheal intubation is often required to restore patency of the airway and protect the tracheobronchial tree from pulmonary aspiration of gastric contents.
- Indications of intubation:
 - 1- Failure to maintain airway tone.
 - 2- Swelling of upper airway as in anaphylaxis or infection.
 - 3- Facial or neck trauma with oropharyngeal bleeding or hematoma.
 - 4- Decreased consciousness and loss of airway reflexes.
 - 5- Failure to protect airway against aspiration.
 - 6 - Decreased consciousness that leads to regurgitation of vomit secretions, or blood.
 - 7- Failure to ventilate.
 - 8- End result of failure to maintain and protect airway.
 - 9- Prolonged respiratory effort that results in fatigue or failure, as in status asthmaticus or severe chronic obstructive pulmonary disease.
 - 10- Failure to oxygenate (e.g. transport oxygen to pulmonary capillary blood).
 - 11- End result of failure to maintain and protect airway or failure to ventilate.
 - 12- Diffuse pulmonary edema.

13- Acute respiratory distress syndrome

4- Large pneumonia or air-space disease.

15- Pulmonary embolism.

6- Cyanide toxicity, carbon monoxide toxicity, methemoglobinemia, i - Anticipated clinical course or deterioration (e.g. need for situation control, tests, or procedures).

18- Uncooperative trauma patient with life-threatening injuries who needs procedures e.g. tube thoracostomy) or immediate CT scanning.

19- Stab wound to neck with expanding hematoma.

20- Septic shock with high minute-ventilation and poor peripheral perfusion.

21- Intracranial hemorrhage with altered mental status and need for close blood pressure control.

22- Cervical spinal fracture with concern for edema and loss of airway patency.

(331) (C) Interstitial fluid.

Edema is an abnormal accumulation of fluid in the interstitium, which are locations beneath the skin in one or more cavities of the body, is clinically shown as swelling.

Generally the amount of interstitial fluid is determined by the balance of fluid homeostasis and increased secretion of fluid into the interstitium or impaired removal of this fluid may cause edema.

Pitting edema is graded on a scale from 1 to 4, which is based on both the depth the (pit) leaves and how long the pit remains.

A patient with a score of 1 has edema that is slight (roughly 2mm in depth) and disappears rapidly, score of 2 is deeper (4mm) and disappears within 15 seconds.

score of 3 is deeper yet (6mm) and can last longer than a minute: in stage 3 pitting edema the ; remity also looks grossly swollen.

Finally, stage 4 is the most severe with deep pitting (8mm or greater in depth) that may last more than 2 minutes.

(332) (B) Mosquito.

- Most of these viruses are transmitted by the bite from an infected arthropod (mosquito or tick).

(333) (A) Killing the vector

Lyme disease is caused by Borrelia burgdorferi bacteria.

Symptoms: rash, flu-like symptoms, later; joint pain, neurological problems.

The best way to prevent Lyme disease is to avoid areas where deer ticks live, especially wooded, bushy areas with long grass.

Ticks should be removed as soon as possible with tweezers.

(334) (A) Steroids.

Erysipelas gangrenosum is an uncommon, ulcerative cutaneous condition of uncertain etiology.

It is associated with systemic diseases in at least 50% of patients who are affected.

Treatment typically includes high doses of corticosteroids, such as prednisone, along with other drugs designed to suppress the immune system.

(335) (C) It will resolve without treatment.

- *Moliuscum contagiosum* is a relatively common viral infection of the skin that results in round, firm, painless bumps ranging in size from a pinhead to a pencil eraser.
- If the bumps are scratched or injured, the infection can spread to surrounding skin.
- In adults, *moliuscum contagiosum* involving the genitals is considered a sexually transmitted infection.
- *Moliuscum contagiosum* usually resolves without treatment within 6-12 months.

(336) (B) *Neisseria Gonorrhoeae*.

males and

- Gonorrhea is an infection caused by a sexually transmitted bacterium that can infect both

females.

pain or

- Gonorrhea is caused by *Neisseria gonorrhoeae* bacteria (a Gram-negative diplococcus).

- Symptoms in males include painful urination, pus-like discharge from the tip of the penis, swelling in one testicle

(337) (C) *Pasteurella multocida*.

- *Pasteurella multocida* is a small, Gram-negative, non-motile, non-spore-forming coccobacillus with bipolar staining features.
- *Pasteurella multocida* often exists as a commensal organism in the upper respiratory tracts of many livestock, poultry and domestic pet species, especially cats and dogs.
- *Pasteurella multocida* infection in humans is often associated with an animal bite, scratch, or lick, but infection without epidemiologic evidence of animal contact may occur.

(338) (B) N-acetylcysteine.

- N-acetylcysteine works to reduce acetaminophen toxicity, by replenishing body stores of the antioxidant glutathione.
- Glutathione reacts with the toxic N-acetyl-p-benzoquinone imine metabolite so that it does not damage cells and can be safely excreted.

(339) (A) Claudication.

- These characteristics are likely to be evidence of claudication.

(340) (A) Reiter's syndrome.

- Reiter's syndrome is a form of reactive arthritis.
- Presentation of Reiter's syndrome is arthritis of large joints, conjunctivitis or uveitis and urethritis in men or cervicitis in women.

(341) (A) Pellagra.

- The classic triad is dermatitis, diarrhea and dementia for pellagra.
- Pellagra is due to vitamin B3 deficiency.

(343) (B) Proximal muscle tenderness.

- Polymyalgia rheumatica is characterized by proximal myalgia of the hip and shoulder girdles with accompanying morning stiffness that lasts for more than one hour.
- Muscle weakness is not a feature of polymyalgia rheumatic.

(344) (A) Naloxone.

- Naloxone is a pure opioid receptor antagonist.
- Unlike other opioid receptor antagonists it has no concomitant agonist properties.
- Naloxone is a medication used to counter the effects of opioid drug overdose, such as heroin or morphine, specifically the life-threatening depression of the central nervous system, respiratory system and hypotension secondary to opiate overdose.
- Mechanism of action: a competitive opioid antagonist; synthetic congener of oxymorphone.

(345) (A) Pallor is seen, then cyanosis then red finger without other clinical features.

- Raynaud's phenomenon manifests as recurrent vasospasm of the fingers and toes and usually occurs in response to stress or cold exposure.
- It is characterized by pallor, cyanosis, suffusion and a sense of fullness or tautness, which may be painful.

(346) (A) Tetracycline.

- Aluminum hydroxide decreases levels of tetracycline by inhibiting gastrointestinal absorption.
- Prevention of interactions is achieved by monitoring the patient closely, using alternatives if available and separate intake of the drugs by 2 hours.

(347) (A) Painful vesicular and ulcers.

- When present, the initial symptom of genital herpes usually is pain or itching, beginning within a few weeks of exposure to an infected sexual partner.
- After several days, small red bumps or tiny white blisters may appear.
- The blisters then rupture, becoming ulcers that ooze or bleed.

(348) (B) Dark field microscopy.

- This is a case of syphilis.
- A primary syphilis lesion is an ulcer known as a *chancre*.
- It is typically indurated, with a clean base and rolled edges and develops an average of 3 weeks after infection (10-90 days).
- The lesion may occur on any area of skin or mucous membrane but usually appears on or near the genitals.
- Syphilis, also known as great imitator, is a sexually transmitted disease caused by the spirochete bacterium. *Treponema pallidum*.

- It classically presents as single painless non-itchy skin ulceration with sharp borders.
- *Treponema pallidum* is too small to be seen under the light microscope so dark field microscopy is necessary when sores are present.
- Blood tests can confirm the presence of antibodies.
- The antibodies remain in the patient's body for years, so the test can be used to determine a current or past infection.
- Syphilis presents with painless ulcer in the penis.
- Gonorrhea is sexually transmitted disease caused by bacterial infection cause pain and discharge, but there is no ulcer.
- Chancroid is sexually transmitted disease caused by bacterial infection cause pain and discharge, but there is no ulcer.
- Herpes simplex virus is sexually transmitted disease caused by virus that cause painful ulcer with discharge.

(349) (A) Interferon.

- Flu-like symptoms following each injection (fever, chills, headache, muscle ache, pains and malaise) occur with all interferons.

(350) (A) Permethrin.

- Permethrin contains chemicals that kill scabies mites and their eggs.

(351) (A) Hydralazine.

- Drug-induced systemic lupus erythematosus causes include chlorpromazine, hydralazine, isoniazid, methyldopa, penicillamine, procainamide, quinidine and sulfasalazine.

(352) (D) Lymphangitis.

- Red streaks in the hand are due to lymphangitis.

(353) (A) Anaphase.

- Anaphase begins when the duplicated centromeres of each pair of sister chromatids separate and the daughter chromosomes begin moving toward opposite poles of the cell due to the action of the spindle.

(354) (A) Multiple myeloma.

- Rouleaux formation is the arrangement of RBCs in fluid blood (or in diluted suspensions) with their biconcave surfaces in opposition, thereby forming groups that resemble stacks of coins.
- In multiple myeloma, peripheral blood smears may show Rouleaux formation.
- Conventional plain radiography can usually depict lytic lesions.
- Such lesions appear as multiple, rounded, punched out areas found in the skull, vertebral column, ribs and pelvis.

(355) (B) Anorexia nervosa.

Anorexia nervosa complications include electrolyte imbalance (hypokalemia) weight loss and osteopenia
malnutrition of tooth enamel.

(356) (B) Hypovitaminosis osteopenia.

Depression is the most severe complication of anorexia nervosa and it is difficult to reverse with
treatment

(357) (A) Hypokalemia.

Bulimic anorexia is also known as binge eating, which means the patient eats a large amount then forces
vomiting; leading to a loss of acids and electrolytes which leads to hypokalemia and metabolic alkalosis.

It is associated with fluid and electrolyte imbalances including hypokalemia, hyponatremia and
hypochloremic alkalosis

(358) (A) Weight gain.

Weight gain is recommended and in order to maintain a normal weight and decrease the development
of osteoporosis

(359) (A) Anorexia nervosa.

- These symptoms are associated with anorexia nervosa (BMI = 18, fine hair all over the body,
feeling of intense obesity eat excessive exercise

Anorexia presents with decrease body weight amenorrhea and alopecia. Anorexia nervosa presents with
normal or increase body weight, restrict eating followed by overeating
then guilt.

(360) (A) Clindamycin.

Clindamycin is the antimicrobial agent most commonly used against anaerobes

(361) (A) Previous vaccination against hepatitis B.

anti-hepatitis B surface are present in persons immunized with hepatitis B vaccine, whereas both
hepatitis B surface and anti-HBs are detected in persons with a resolved infection.

(362) (D) Ropinirole.

Dopamine agonist is the most commonly used medicines to treat restless leg syndrome.

Ropinirole and pramipexole are approved for the treatment of restless leg syndrome, dopamine agonists
are largely replacing levodopa as first line treatment for restless leg syndrome.

FAMILY MEDICINE



- (1) Which of the following is true regarding chickenpox (varicella) vaccine in adult?
- (A) 2 doses, 2 weeks apart.
 - (B) 2 doses, 6 weeks apart.
 - (C) 2 doses, 6 months apart.
 - (D) 3 doses, during 6 months.
- (2) Which of the following is an example of secondary prevention?
- (A) Measles vaccine.
 - (B) Rubella vaccine.
 - (C) Detection of asymptomatic diabetic patient.
 - (D) Coronary bypass graft.
- (3) Which of the following is not alive vaccine?
- (A) BCG.
 - (B) Hepatitis B vaccine.
 - (C) Oral polio virus vaccine.
 - (D) Varicella vaccine.
- (4) What is the definition of epidemic curve?
- (A) A graph in which the number of new cases of a disease is plotted against an interval of time to describe a specific epidemic or outbreak.
 - (B) The curve which demonstrates the straight line relationship between 2 variables when both of them are scaled as logarithms.
 - (C) A curve representing graphically the probabilities of different numbers of occurrences of an event.
 - (D) A graphic presentation of a life table.
- (5) What is the most common problem present in primary care?
- (A) Coryza.
 - (B) Congenital heart diseases.
 - (C) Bronchial asthma.
 - (D) Diabetes mellitus.
- (6) What is the most important factor for a smoker to quit?
- (A) Patient desire.
 - (B) Nicotine pills.
 - (C) Program plan.
 - (D) Change in life style.
- (7) What does it mean if the likelihood ratio of a disease incidence is 0.3?
- (A) Large increase.
 - (B) Small increase.
 - (C) Small decrease.
 - (D) Large decrease.

- (8) If you face difficulty getting accurate information from a patient, what is the best course of action?
- (A) Ask direct questions (dose-ended).
 - (B) Ask open questions.
 - (C) Control the discussion.
 - (D) Use medical terms.
- (9) What is the meaning of endemic?
- (A) Spread of disease in incidence, which is virtually constant all the time.
 - (B) Spread of disease from country to country by carrier.
 - (C) Rapid spread of disease.
 - (D) Very low incidence of disease.
- (10) What is the proper way to reduce weight in patient diagnosed with diabetes mellitus type2?
- (A) Decrease calories intake by 1500 kcal/day.
 - (B) Decrease calories intake and increase fat.
 - (C) Decrease calories intake by 500 kcal/kg/week.
 - (D) Decrease calories intake by 800 kcal/day.
- (11) In a primary health care center, of 50 children, 10 of them got the disease in the first week, another 10 on the subsequent 2 weeks. What is the incidence of the disease in that primary health care center?
- (A) 20%.
 - (B) 40%.
 - (C) 60%.
 - (D) 80%.
- (12) During a TB outbreak, what should be given as a prophylaxis?
- (A) BCG.**
 - (B) Isoniazid.
 - (C) Ethambutol.
 - (D) Rifampicin.
- (13) What is the weight classification of a 15-year-old girl with BMI = 24?
- (A) Under weight.
 - (B) Normal weight.
 - (C) Over weight.
 - (D) Obese.
- (14) Regarding smoking cessation, the peak of withdrawal symptoms occurs after:
- (A) 1-2 days.
 - (B) 2-4 days.
 - (C) 1 week.
 - (D) 2 weeks.

(15) What is an attributable risk?

- (A) Number of new cases of a disease occurring in a specified time period divided by the number of individuals at risk of developing the disease during the same time.**
- (B) A number of cases of a disease attributable to one risk factor.**
- (C) A measure of the strength of association based on prospective studies (cohort studies).**
- (D) None of the above.**

(16) What is the contraindication of buprionone used in smoking cessation?

- (A) Seizure.**
- (B) Arrhythmia.**
- (C) Xerostomia.**
- (D) Headache.**

(17) What is the most effective way to disseminate health education?

- (A) Mass media.**
- (B) Group discussion.**
- (C) Individual approach.**
- (D) No difference.**

(18) A male patient has a known case of congestive heart failure and likes to eat out 2-3 times weekly. What is the advice for him?

- (A) Eat without any salt.**
- (B) Eat 4 gm salt.**
- (C) Low fat and high protein.**
- (D) Take a lot of fluids.**

(19) In a city with 1,500 persons, out of 105 births, there are 5 still births, 4 neonatal deaths and 2 deaths before 1-year-old. What is the perinatal mortality?

- (A) 4.**
- (B) 5.**
- (C) 6.**
- (D) 9.**

(20) What is the nutritional supplement given for an adolescent female who is eating mostly fast food?

- (A) Calcium and folic acid.**
- (B) Vitamin C and folic acid.**
- (C) Zinc and folic acid.**
- (D) Zinc and Vitamin C.**

(21) A study was performed on a population of 10,000. They found 2,000 to have diabetes mellitus and at end of the study that had increased by 1,000. What is the incidence of diabetes mellitus?

- (A) 10%.**
- (B) 12%.**
- (C) 24%.**
- (D) 30%.**

- (22) Which of the following is an example of close ended question?
- (A) Where is the pain in your chest?
 - (B) Can I help you?
 - (C) Could you be more specific?
 - (D) Any other/further complaints?
- (23) What is the most common cause of immediate death in a burn victim?
- (A) Inhalational injury.
 - (B) Septic shock.
 - (C) Hypovolemic shock.
 - (D) Associated injury.
- (24) What does perinatal mortality mean?
- (A) Number of stillbirths 20 weeks of gestational age.
 - (B) Number of stillbirths + neonatal deaths.
 - (C) Number of deaths/1,000 live babies.
 - (D) Death of a live born baby within the first 28 days of life.
- (25) What is the best method for eradication of *Entamoeba histolytica*?
- (A) Boiling of water.
 - (B) Freezing.
 - (C) Using chlorine.
 - (D) Filtration.
- (26) Which of the following is correct about case control study?
- (A) Both groups should be randomized.
 - (B) Both groups must be equal in numbers.
 - (C) This study must look for backward risk factors.
 - (D) This study must look for forward risk factors.
- (27) Which one of the following is a characteristic of randomized control study?
- (A) It is always expensive.
 - (B) It gives un-useful information about adverse effects.
 - (C) It is the gold standard for a clinical trial.
 - (D) None of the above.
- (28) A study show, there are 100 patients on carbamazepine and after 2 years they check how many of them have hyperlipidemia. What is the type of this study?
- (A) Case control study.
 - (B) Retrospective cohort study.
 - (C) Prospective cohort study.
 - (D) Cross sectional study.

(29) What is the best method for prevention diseases?

- (A) Immunization.**
- (B) Teaching individuals how to protect themselves.**
- (C) Diet and nutrition.**
- (D) Physical activity.**

(30) What is the best way to promote health in populations?

- (A) Environment modification.**
- (B) Promote personal hygiene.**
- (C) Social support networks.**
- (D) Family planning.**

(31) A female is planning to become pregnant. What should she be informed about the varicella vaccine?

- (A) Tell her that it is alive vaccine.**
- (B) Tell her that it is safe.**
- (C) Tell her that, if she takes the vaccine, she should delay pregnancy 1-3 months.**
- (D) Just give her the vaccine.**

(32) What is the advice for a patient who is over weight (BMI =28) and has a known case of ischemic heart disease?

- (A) Decrease weight and do exercises.**
- (B) Eat 4 gm salt per day.**
- (C) Eat a diet that is high in salt and saturated fat.**
- (D) All of the above.**

(33) If there is outbreak of diphtheria and tetanus in community, which one of the following is correct regarding vaccination of pregnant woman?

- (A) Contraindicated to give DT vaccine.**
- (B) If exposed.terminate pregnancy immediately.**
- (C) If exposed.terminate after 72 hours.**
- (D) Give DT vaccine anyway.**

(34) Which one of the following is correct regarding pneumococcal vaccine?

- (A) It is not recommended in healthy child.**
- (B) It cannot be given with MMR vaccine.**
- (C) It can be given to child less than 2-year-old.**
- (D) If given to sickle cell patient who is then exposed to infection, he has to take penicillin.**

(35) What is the best method for history taking?

- (A) Yes or no questions.**
- (B) Open ended questions.**
- (C) Close ended questions.**
- (D) None of the above.**

- (36) What is the best method to prevent plague?
- (A) Rodent eradication.
 - (B) Spray insecticide.
 - (C) Give prophylactic antibiotic.
 - (D) Hand wash.
- (37) Which of the following is true about case control studies?
- (A) It divides into groups and compares results.
 - (B) A study that follows a group of healthy people with different levels of exposure and assesses what happens to their health over time.
 - (C) A study that compares groups in terms of their current health and exposure status and assesses their similarities.
 - (D) It determines the number of cases of a disease attributable to one risk factor.
- (38) All of the following are primary preventions of anemia except:
- (A) Iron and folic acid given in pregnancy and postnatal.
 - (B) Limitation of cow milk before 12-month-old.
 - (C) Genetic screening for hereditary anemia.
 - (D) Health education about food rich in iron.
- (39) What is the specificity of test?
- (A) When the person does have the disease with positive test.
 - (B) When the person does have the disease with negative test.
 - (C) When the person does not have the disease with positive test.
 - (D) When the person does not have the disease with negative test.
- (40) What is the best way to prevent house mites?
- (A) Cover the pillows with impermeable cover.
 - (B) Wash the clothes in hot water.
 - (C) Remove the old carpets.
 - (D) Buy washable stuffed toys.
- (41) Which of the following is true regarding screening for cancer?
- (A) Screening for cervical cancer has decreased in recent years.
 - (B) Screening for breast cancer has decreased in recent years.
 - (C) Screening for colorectal cancer is inadequate for the high risk groups.
 - (D) Screening for lung cancer has reduced the mortality rate of lung cancer.
- (42) What are the antimalarial prevention methods in addition to pharmacological measures?
- (A) Vector eradication with protection from vector bite.
 - (B) Vector eradication with inspection of vector bite.
 - (C) Clothing disinfection with protection from vector bite.
 - (D) Clothing disinfection with inspection of vector bite.

(43) An obese cardiac patient with hypertension and hyperlipidemia eats unhealthy food. What are the three most correctable risk factors?

- (A) Hypertension, obesity and low HDL.**
- (B) High triglyceride, unhealthy food and sedentary life.**
- (C) High cholesterol, unhealthy food and sedentary life.**
- (D) High cholesterol, hypertension and obesity.**

(44) A 45-year-old female patient is newly diagnosed with diabetes mellitus type 2 just 2 weeks ago. She has an appointment today to discuss the next step of managing her chronic disease. She was on time for her appointment at 10:00 morning, but because of a complicated patient you did not get into her room until 11:15 morning. When you walk in, she appears extremely angry. How should you approach this situation?

- (A) Acknowledge her anger with a statement like, you seem furious.**
- (B) Be empathetic, understanding that her anger is likely displaced and a reaction to her new chronic illness.**
- (C) Explain the situation with a statement like, my last patient was very complex and he really needed my attention.**
- (D) Help the patient understand that her anger should be directed at the illness not at you.**

(45) Which one of the following is true regarding the null hypothesis?

- (A) The effect is not attributed to chance.**
- (B) There is significant difference between the tested populations.**
- (C) There is no significant difference between the tested populations.**
- (D) The concept in which three approaches is used differently in to statistical inference.**

(46) Which one of the following is true regarding diabetes mellitus in the Kingdom of Saudi Arabia?

- (A) The prevalence is about < 10%.**
- (B) Most of the patients are diabetes mellitus type 1.**
- (C) Female patients are more affected with diabetes mellitus type 2.**
- (D) Most of patients with diabetes mellitus type 2 are obese.**

(47) What is the most effective measure to prevent spread of infection among health care workers and patients in a nursery?

- (A) Wash hand before and after examining for each patient.**
- (B) Wear gown and gloves before entering the nursery.**
- (C) Wear shoe covers.**
- (D) None of the above.**

(48) A 17-year-old female patient missed her second dose of varicella vaccine. She had the first dose about 1 year ago. What is the action now?

- (A) Give her double dose vaccine.**
- (B) Give her the second dose only.**
- (C) Revaccinate from the start.**
- (D) See if she has antibody and act accordingly.**

- (49) Other than lung cancer, what cancer does smoking increases its risk?
- (A) Colon cancer.
 - (B) Bladder cancer.
 - (C) Liver cancer.
 - (D) Intestine cancer.
- (50) What is the epidemic disease in poor sanitation areas that affect children and young adults?
- (A) Hepatitis A.
 - (B) Hepatitis B.
 - (C) Hepatitis C.
 - (D) Hepatitis D.
- (51) What type of allergy should be excluded before giving a child the flu vaccine?
- (A) Chicken.
 - (B) Egg.
 - (C) Fish.
 - (D) Banana.
- (52) What is the percent of water in adult human body?
- (A) 40%.
 - (B) Differs depending on age and sex.
 - (C) Less in infant than adult.
 - (D) All of the above.
- (53) One liter of fluid deficit is equal to:
- (A) 0.5 kg.
 - (B) 1 kg.
 - (C) 2 kg.
 - (D) None of the above.
- (54) What is most important in counseling?
- (A) Exclude physical illness.
 - (B) Establishing rapport.
 - (C) Family history.
 - (D) Schedule appointment.
- (55) All of the following will increase patient compliance except:
- (A) Involve the patient in the plan.
 - (B) Make a simplified regimen.
 - (C) Give easy written instructions.
 - (D) Warn the patient about the danger of missing a pill.
- (56) What is the best source of water for patient in travelling?
- (A) Boiled water.
 - (B) Iced water.
 - (D) Tap water.
 - (C) River water.

(57) What should be added to water to prevent dental caries in developing countries?

- (A) Fluoride.**
- (B) Zinc.**
- (C) Copper.**
- (D) Iodide.**

(58) What is true about CPR in a child?

- (A) 30 chest compression 2 ventilation.**
- (B) 30 chest compression 1 ventilation.**
- (C) 15 chest compression 2 ventilation.**
- (D) 15 chest compression 1 ventilation.**

(59) Which of the following is the recommended diet to prevent ischemic heart disease?

- (A) Decrease the intake of meat and dairy.**
- (B) Decrease the intake of meat and bread.**
- (C) Increase the intake of fruit and vegetables.**
- (D) All of the above.**

(60) Which of the following is proven to reduce the incidence of cancer?

- (A) Salt.**
- (B) Mineral water.**
- (C) Vitamin D.**
- (D) Fiber.**

(61) A patient presented with scoliosis. At which degree should the patient be referred to the orthopedic?

- (A) 5%.**
- (B) 10%.**
- (C) 15%.**
- (D) 20%.**

(62) What is vitamin deficiency cause Beriberi disease?

- (A) Vitamin B1 (thiamine).**
- (B) Vitamin B2 (riboflavin).**
- (C) Vitamin B3 (niacin/nicotinic acid).**
- (D) Vitamin C (ascorbic acid).**

(63) What is the most common cause of precocious puberty in girl?

- (A) Idiopathic.**
- (B) Functional ovarian cysts.**
- (C) Ovary tumor.**
- (D) Brain tumor.**

(64) How to break a bad news to patient who is newly diagnosed with cancer?

- (A) Inform his family.**
- (B) Find out how much the patient knows about it.**
- (C) Let social service informs him.**
- (D) Do not tell him.**

(65) What is the most common chromosomal abnormality?

- (A) Trisomy 13.
- (B) Trisomy 21.
- (C) Trisomy 18.
- (D) Turner syndrome.

(66) What is the first step to reduce weight in a very obese girl?

- (A) Increase water intake.
- (B) Decrease calorie intake.
- (C) Switch dairy milk for non-dairy milk.
- (D) Replace some animal products with plant-based foods.

(67) What is the first thing to do regarding epidemiological study or investigation?

- (A) Good sampling.
- (B) Count those who have the disease.
- (C) Verifying the diagnosis.
- (D) Implement control and prevention measures.

(68) What are the most factors that increase the chance to have diabetes mellitus in a healthy male with a family history of diabetes mellitus type 2?

- (A) Hypertension and Obesity.
- (B) Smoking and Obesity.
- (C) Pregnancy and hypertension.
- (D) Pregnancy and Smoking.

(69) The way to determine the accuracy of occult blood test for 11,000 elderly patients is by measuring:

- (A) Sensitivity.
- (B) Specificity.
- (C) Positive predictive value.
- (D) Negative predictive value.

(70) Using the following chart, relative risk of those with the risk factor to those without risk factor is:

	Risk factor	Disease	Normal	Total
(A) $[A/(A+B)] / [C/(C+D)]$.	Present	A	B	A+B
(B) $[A/(A+C)]/[B(B+D)]$ 1.	Absent	C	D	C+D
(C) $A/(A+B)$.	Total	A+C	B+D	
(D) $C/(C+D)$.				

(71) What is the management of eating disorder?

- (A) Cognitive and behavioral therapy.
- (B) Pharmacology.
- (C) Hospitalization.

ANSWERS

FAMILY MEDICINE



(1) (B) 2 doses, 6 weeks apart.

- Chickenpox is a common illness caused by the varicella-zoster virus.
- Symptoms of chickenpox include fever and itchy spots or blisters all over the body.
- People who have not been vaccinated by 13-year-old should get 2 doses of the vaccine, 4-8 weeks apart.

(2) (C) Detection of asymptomatic diabetic patient

- Secondary prevention means methods to diagnose and treat existent disease in early stages before it causes significant morbidity.
- Illness is absent and disease is present.

(3) (B) Hepatitis B vaccine.

- Examples of live attenuated vaccines include MMR combined vaccine, varicella (chickenpox) and oral poliovirus vaccines.
- Live attenuated strains of bacteria include BCG and oral typhoid vaccines.
- Hepatitis B vaccine is an example of vaccines that produced by genetic engineering.

(4) (A) A graph in which the number of new cases of a disease is plotted against an interval of time to describe a specific epidemic or outbreak.

- The classical epidemiological curve is drawn when the number of new cases of an infection is plotted against time.
- It can provide information on the following characteristics of an outbreak: pattern of spread, magnitude, outliers, time trend, exposure and/or disease incubation period.

(5) (A) Coryza.

- Coryza is a word describing the symptoms of a cold.
- It describes the inflammation of the mucous membranes lining the nasal cavity, which usually gives rise to the symptoms of nasal congestion and loss of smell, among other symptoms.

(6) (A) Patient desire.

- The clinician should first assess the patient's tobacco use, the desire to stop smoking and the history of previous quit attempts, including methods used and their effectiveness.
- Many behavioral methods have been advocated to encourage patients to work toward quitting.
- Most people who give up cigarettes do so on their own, without joining a formal stop smoking program.
- The single most important factor for people who successfully quit smoking is the belief and confidence that they could do it.

(7) (C) Small decrease.

- The likelihood ratio is the likelihood that a given test result would be expected in a patient with the target disorder compared to the likelihood that same result would be expected in a patient without the target disorder.
- A likelihood ratio greater than 1 produces a post-test probability which is higher than the pre-test probability.
- A likelihood ratio less than 1 produces a post-test probability which is lower than the pre-test probability.
- When the pre-test probability lies between 30-70%, test results with a very high likelihood ratio (say, above 10) rules in the chance that the patient has the disease.

(8) (A) Ask direct questions (dose-ended).

- Closed ended questions are just that: direct questions that ask for specific pieces of information from a patient.
- Closed questions have their greatest value when we need to obtain facts and specific pieces of information, especially if you face difficulty in getting specific information.
- By their nature they limit the patient's field of choice and length of response.

(9) (A) Spread of disease in incidence, which is virtually constant all the time.

- Endemic means the constant presence of a disease or infectious agent in a certain geographic area or population group (usual rate of disease).
- Epidemic means the rapid spread of a disease in a specific area or among a certain population group (excessive rate of disease).
- Pandemic means a worldwide epidemic; an epidemic occurring over a wide geographic area and affecting a large number of people.

(10) (D) Decrease calories intake by 800 kcal/day

- To lose 0.5-1 kg/week (a safe rate of weight loss), subtract 500-1,000 calories from the total number of calories needed to maintain weight.
- As an example, an overweight man who weighs 120 kg would need to eat 2,500 cal/day to maintain his weight, to lose 0.5-1 kg/week; he should eat 1,500-2,000 cal/day.
- As weight is lost, the recommended calorie intake should be recalculated.

(11) (D) 80%.

- Incidence is a measure of the risk of developing some new condition within a specified period of time.
- Within 3 weeks, there are 40 children affected out of 50.
- The percent will be 80%.

(12) (B) Isoniazid.

- Three strategies may be used in the prevention of clinical TB:
 - 1- Biologic prophylaxis of uninfected persons with BCG vaccine.
 - 2- Chemoprophylaxis of newly or recently infected persons with isoniazid.
 - 3- Isoniazid chemoprophylaxis of selected persons with latent TB infection.
- Isoniazid is used alone or with other drugs to treat TB and to prevent it in people who have had contact with TB bacteria.

(13) (B) Normal weight

- BMI < 16: severe under weight.
- BMI 16-18: under weight.
- BMI 18-25: normal weight
- BMI 25-30: over weight.
- BMI 30-35: obese class I (moderately obese).
- BMI 35-40: obese class II (severely obese).
- BMI > 40: obese class III (very severely obese or morbidly obese)

(14) (B) 2-4days.

Withdrawal symptoms begin as soon as 4 hours after the last cigarette, generally peak in intensity after 4 hours and disappear after 2 weeks.

(15) (B) A number of cases of a disease attributable to one risk factor.

Attributable risk is a measure of how much disease risk is attributed to a certain exposure, is useful in determining how much disease can be prevented for public health guidelines and planning.

(16) (A) Seizure.

Levetiracetam is contraindicated in patients with a history of significant head trauma, seizure disorder, eating disorder and in those who have used monoamine oxidase inhibitors in the past 14 days.

(17) (A) Mass media.

Using mass media, a large number of people from all socioeconomic statuses can be reached.

(18) (A) Eat without any salt.

When eating out, the patient with congestive heart failure is advised to request that the cook prepare foods without adding salt and think about hidden sources of salt and sodium, such as salad dressings and soups.

In general, for people with heart failure, the daily recommended amount of dietary sodium is no more than 2 gm/day.

(19) (D) 9.

Stillbirth is the death of a fetus 22 weeks gestation or more.

- Neonatal death is the death of a live newborn in the first 28 days.

The perinatal mortality = still births + neonatal deaths, here

perinatal mortality = 5 (still births) + 4 (neonatal deaths) = 9.

(20) (A) Calcium and folic acid.

Folate plays an integral role in DNA, RNA and protein synthesis.

Thus, adolescents have increased requirements for folate during puberty.

Adequate calcium intake is essential also for development of strong and dense bones during the adolescent growth spurt.

Inadequate calcium intake may increase fracture risk during adolescence and the risk of developing osteoporosis in later life.

(21) (A) 10%.

Incidence is a measure of the risk of developing some new condition within a specified period of time, so the incidence is measured by new cases divided by total population and finally multiplies by 100.

Incidence of diabetes mellitus = $(1,000/10,000) \times 100 = 10\%$.

(22) (A) Where is the pain in your chest?

- **Open-ended questions are those questions that will solicit additional information from the inquirer.**
- **Sometimes called infinite response or unsaturated type questions.**
- **By definition, they are broad and require more than 1-2 word responses.**

(23) (A) Inhalational injury.

- **Asphyxiation and carbon monoxide poisoning (inhalational injuries) are the most common cause of early death associated with burn injury.**

(24) (B) Number of stillbirths + neonatal deaths.

- **Perinatal mortality = number of stillbirth + neonatal death.**
- **Perinatal mortality rate = [(number of stillbirth + neonatal death)/ live birth]x 1,000.**

(25) (A) Boiling of water.

- **No vaccine is available to prevent amebiasis and there is no recommended chemoprophylaxis.**
- **When traveling in tropical countries where poor sanitation exists drink purified or boiled water and do not eat uncooked vegetables or unpeeled fruit.**
- **Public health measures include water purification, water chlorination and sewage treatment programs.**

(26) (B) Both groups must be equal in numbers.

- **A case control study is a type of study design used widely, often in epidemiology.**
- **It is a type of observational study in which two existing groups differing in outcome are identified and compared on the basis of some supposed causal attribute**
- **After clearly defining cases and controls, decide on data to be collected; the same data must be collected in the same way from both groups.**
- **Matching in a case control study involves sampling of controls to parallel selected characteristics of cases in order to reduce the likelihood of confounding the matched features.**

(27) (C) It is the gold standard for a clinical trial.

- **A randomized controlled trial is a specific type of scientific experiment and the gold standard for a clinical trial.**
- **It is often used to test the efficacy and/or effectiveness of various types of medical intervention within a patient population.**

(28) (C) Prospective cohort study.

- **A prospective cohort study is a cohort study that follows over time a group of similar individuals (cohorts) who differ with respect to certain factors under study, to determine how these factors affect rates of a certain outcome.**
- **It is important for research on the etiology of diseases and disorders in humans because for ethical reasons people cannot be deliberately exposed to suspected risk factors in controlled experiments**

(29) (B) Teaching individuals how to protect themselves.

- Preventing any disease can be grouped into three levels.
- The levels are named for the stages of disease they target.
- The three levels of prevention are primary, secondary and tertiary.
- We use primary prevention methods before the person gets the disease.
- Primary prevention aims to prevent the disease from occurring.
- So primary prevention reduces both the incidence and prevalence of a disease.
- Encouraging people to protect themselves from the sun's ultraviolet rays is an example of primary prevention of skin cancer.

(30) (B) Promote personal hygiene.

- Personal hygiene refers to keeping physically and mentally healthy to avoid sickness or disease and to be able to live in normal social life.
- All persons are required to pay attention to their own cleanliness, eating, drinking, discharge of excrement, dressing, sleeping, work and rest, including proper sexual intercourse in accordance with the principles of hygiene.
- Hygienic behavior is the first important role in the prevention of diseases related to water and sanitation.
- Washing hands is the most effective behavior for the prevention of diarrhea as well as for the prevention of roundworm and whipworm.

(31) (C) Tell her that, if she takes the vaccine, she should delay pregnancy 1-3 months.

- If a pregnant woman gets varicella in her first or early second trimester, her baby has a small risk (0.4-2.0%) of being born with congenital varicella syndrome, the baby may have scarring on the skin, abnormalities in limbs, brain and eyes and low birth weight.
- Non-pregnant women who are vaccinated should avoid becoming pregnant for 1 month after each injection.
- It is not given to pregnant women.
- Susceptible women who are exposed to varicella (or shingles, which is caused by the same virus) should receive varicella-zoster immune globulin within 96 hours, which may prevent or modify infection.

(32) (A) Decrease weight and do exercises.

- Any patient with ischemic heart disease must maintain a healthy weight, because being overweight increases the risk of heart disease and increases the likelihood of developing diabetes also.
- Exercise helps achieve and maintain a healthy weight and control diabetes, elevated cholesterol and high blood pressure. All of which are risk factors for heart disease.

(33) (D) Give DT vaccine anyway.

- Both tetanus and diphtheria toxoids and tetanus toxoid vaccines have been used extensively in pregnant women worldwide since the 1960s to prevent neonatal tetanus.
- Tetanus and diphtheria toxoids and tetanus toxoid vaccines administered during pregnancy have not been shown to harm either the mother or baby/fetus.

(34) (D) If given to sickle cell patient who is then exposed to infection, he has to take penicillin.

- **Children who have sickle cell disease and are under 5-year-old are at increased risk of life-threatening pneumococcal infection due to absent or non-functional spleens and a decreased immune response.**
- **To prevent pneumococcal infection, use of penicillin prophylaxis in children with sickle cell disease under 5-year-old and in older children who have had a previous severe pneumococcal infection or have functional/surgical asplenia.**

(35) (B) Open ended questions.

- **First we have to use open-ended questions so the patient feels free to provide additional information.**
- **Then we use dose-ended questions that seek very specific, often yes or no, responses from the patient and do not encourage the patient to provide any additional information.**
- **Good interviews are a mixture of both kinds of questions.**

(36) (A) Rodent eradication.

- **In general, to prevent contracting plague, people should avoid contact with wild animals.**
- **Controlling rat and flea populations where plague is found is also important.**
- **This is accomplished by application of chemicals by trained professionals to kill fleas and rodents.**

(37) (A) It divides into groups and compares results.

- **A case control study is a type of study design used widely, often in epidemiology.**
- **It is a type of observational study in which two existing groups differing in outcome are identified and compared on the basis of some supposed causal attribute.**

(38) (C) Genetic screening for hereditary anemia.

- **Genetic screening for hereditary anemia can be used only to determine one type of anemia.**
- **The best laboratory tests for the diagnosis of anemia involve measuring the packed volume of red cells (hematocrit) or the concentration of hemoglobin in circulating blood.**
- **Because most pregnant women eventually become anemic, it makes sense as a preventive measure to give all women supplementation with medicinal iron during the second half of pregnancy.**
- **Breast milk appears to be adequate to cover the dietary iron requirements of normal birth weight infants up to 6-month-old.**
- **Iron supplementation of preschool children is also important and requires special planning.**
- **Weaning foods rich in iron and/or vitamin C, such as purees of cooked vegetables and raw fruits, are not difficult to prepare in the home.**
- **However, parents need to be motivated and taught how to do so.**

(39) (D) When the person does not have the disease with negative test.

- **The specificity is the ability of the test to correctly identify those without the disease (true negative rate).**

(40) (C) Remove the old carpets.

- Experts say homes with bare floors have up to 90% less dust in them than homes with carpets.
Dust mite numbers can be reduced by replacing carpets with flat surfaces that are easier to vacuum and maintaining relative humidity below 50%.

(41) (C) Screening for colorectal cancer is inadequate for the high risk groups.

- Colorectal screening intervals were chosen to distinguish those who underwent screening at least annually or every 1-3 years from those who underwent screening at less frequent intervals, which was considered inadequate for high-risk syndromes.

(42) (C) Clothing disinfection with protection from vector bite.

- Prevention requires A. 6, C and D: Awareness of risk + Bite avoidance + Chemoprophylaxis (taking preventive medicines if they are travelling to or living in a malaria region) + Diagnosis made promptly with early treatment of an infected case).

(43) (D) High cholesterol, hypertension and obesity.

- The most important modifiable risk factors for heart disease are high blood pressure, high blood cholesterol, cigarette smoking, diabetes mellitus, physical inactivity, unhealthy diet and obesity.

(44) (A) Acknowledge her anger with a statement like, you seem furious.

Dealing with the angry patient is challenging for any health care provider.

The natural reaction to anger is defensiveness, but a defensive response will often escalate the situation. The best approach is for the physician to first recognize the anger, then acknowledge it, try to understand it and respond to it.

if a physician senses that a patient is angry, but the patient has not volunteered this information, it is important to explore the anger.

If the patient seems very upset, it may make him/her angrier if you minimize the situation by saying something like, you seem a little upset.

- If a patient is extremely angry, choose words that seem to match the intensity of his/her feelings.

In some instances anger is displaced and may be truly directed at the disease process or illness.

In that case, the appropriate response is empathy.

However, in this setting, the anger is likely a response to the wait time that the patient has endured and is less likely to be displaced.

Placing the blame on your previous patient should be avoided.

(45) (C) There is no significant difference between the tested populations.

The null hypothesis refers to a general or default position: that there is no relationship between two measured phenomena, or that a potential medical treatment has no effect.

(46) (D) Most of patients with diabetes mellitus type 2 are obese.

- Diabetes mellitus type 2 is closely linked to obesity and sedentary lifestyle.
- BMI has been proved to be a useful index for large scale epidemiological work.

- In the study of hypertensive and diabetic patients attending the primary health care clinics in Riyadh, only 19% of patients were found to have ideal weight (BMI < 25). while 35% were overweight (BMI = 25-29.9), 41% were moderately obese (BMI = 30-40) and 5% were morbidly obese (BMI > 40).
- In general, the prevalence of diabetes mellitus type 2 tended to be higher in males than in females in the majority of age groups.

(47) (A) Wash hand before and after examining for each patient.

- The first and most important step to infection control is hand washing.

(48) (B) Give her the second dose only.

- Any teenager or adult who has not had chickenpox or the chickenpox vaccine should receive the vaccine.
- Adults are 10 times more likely than children to be hospitalized with the severe consequences of chickenpox.
- These consequences include pneumonia and encephalitis.
- For people 13-year-old and older, the minimum interval¹ is 4 weeks.
- If the patient forgets the second dose, just give it.

(49) (B) Bladder cancer.

- The primary risks of tobacco usage include many forms of cancer, particularly lung cancer, kidney cancer, cancer of the larynx and head and neck, breast cancer, bladder cancer, cancer of the esophagus, cancer of the pancreas and stomach cancer.

(50) (A) Hepatitis A.

- Hepatitis A is associated with a lack of safe water and poor sanitation.
- It is transmitted through ingestion of contaminated food and water or through direct contact with an infectious person.

(51) (B) Egg.

- The majority of the IM inactivated influenza vaccines and the intranasal live-attenuated influenza vaccines are cultured in fluid from chicken embryos.
- As a result, there is a small amount of egg protein in these vaccines.
- Thus, there is a potential risk of inducing an allergic reaction when administering the influenza vaccine to an individual with egg allergy.

(52) (B) Differs depending on age and sex.

- The percentage of water varies according to age and gender.
- The amount of water in the human body ranges from 50-75%.
- The average adult human body is 50-65% water, averaging around 57-60%.
- The percentage of water in infants is much higher, typically around 75-78% water, dropping to 65% by 1-year-old.

(53) (B) 1 kg.

- Each kilogram of weight loss is equal to 1 liter of fluid deficit.

(54) (B) Establishing rapport.

Rapport is the single most important aspect of a counseling relationship.

- It has been found to increase patient interest, motivation and comfort, all which contribute to clinical efficacy.

(55) (D) Warn the patient about the danger of missing a pill.

Two randomized clinical trials have shown that simplified dosing schedules have improved patient adherence to medication as prescribed.

Some, but not all, randomized controlled trials show multidimensional interventions can also improve adherence.

- These interventions include combinations of patient and family education, home monitoring of disease status and increased convenience of care, such as workplace access.

It is recommended to provide patients with simple written instructions to enhance compliance with medications.

(56) (A) Boiled water.

Food and water in developing countries may not be as clean as they are at home.

These items might contain bacteria, viruses, or parasites that could make you sick, so be safe boil water before drinking, you can also drink commercially available bottled water when possible.

(57) (A) Fluoride.

Dental decay occurs when acid destroys or demineralizes the outer surface of the tooth (the enamel), bacteria in the mouth from food and drinks containing sugar produce acid and fluoride repairs mineralization before it becomes permanent.

Fluoride does this by encouraging repair of enamel surface and discouraging demineralization.

Fluoride also helps strengthen the mineral structure of developing teeth.

(58) (C) 15 chest compression 2 ventilation.

Regarding CPR, it is always 30/2 except in child it becomes 15/2.

(59) (C) Increase the intake of fruit and vegetables.

A large observational study suggests that a higher intake of fruits and vegetables is associated with reduced risk of ischemic heart disease mortality.

Whether this association is causal and if so the biological mechanisms by which fruits and vegetables relate to lower ischemic heart disease risks remains unclear.

(60) (D) Fiber.

Evidence consistently suggests that eating plenty of fiber can reduce the risk of bowel cancer, eating high in fiber can help keep bowel healthy and prevent constipation, fiber-rich foods include wholegrain pasta, bread, breakfast cereals and rice ulses, fruit and vegetables are also good sources of fiber.

(61) (D) 20%.

- Orthosis is effective in preventing significant curve progression in patients with 20-39% curves.
- Patients with Cobb angles of <20% at the time of presentation may be observed.
- Patients with substantial growth remaining with Cobb angles between 40-50% may be managed with bracing or surgery.
- Patients with substantial growth remaining with Cobb angles of > 50% at the time of diagnosis usually require surgical intervention.

(62) (A) Vitamin B1 (thiamine).

- Beriberi refers to a cluster of symptoms caused primarily by a nutritional deficit in Vitamin B1 (thiamine).
- Symptoms of beriberi include weight loss, emotional disturbances, impaired sensory perception, weakness and pain in the limbs and periods of irregular heart rate.
- Edema is common.
- It may increase the amount of lactic acid and pyruvic acid within the blood.
- In advanced cases, the disease may cause high output cardiac failure and death.
- Symptoms may occur concurrently with those of Wernicke's encephalopathy, a primarily neurological thiamine-deficiency related condition.

(63) (A) Idiopathic.

- In girls, the cause of precocious puberty 90-95% of the time is idiopathic, or unknown.
- Boys are more likely to have an underlying identifiable cause.

(64) (B) Find out how much the patient knows about it.

- Physician is ultimately responsible for telling the patient bad news.
- Nurses and social services help, educate and support.
- The patient may want a member of their family with them; however, this must be established prior to the interview.
- Arrange some privacy, ideally an interview room. Where a patient is confined to bed, pull the curtains around the bed.
- It is important to gain a rapport with your patient.
- The mechanisms by which you do this will depend very much on the patient, their condition, cultural background and age.
- It is important before you begin breaking bad news that you assess the patient's understanding of their condition.
- At this stage you can correct any misunderstandings and it will enable you to assess if the patient is engaging in either denial, wishful thinking or unrealistic expectations of treatment.
- One mechanism to help you is to assess the level of information the patient wants.
- Offer to speak to family members or caregivers should the patient wish.
- If patient is in surgery then most likely physician will inform family first.
- If patient is in a clinic setting, then it is recommended patient and family are informed together.
- Robert Buckman's six step protocol for breaking bad news:
 - 1- Getting started.
 - 2- Finding out how much the patient knows.
 - 3- Finding out how much the patient wants to know.
 - 4- Sharing the information.
 - 5- Responding to the patients feelings.
 - 6- Planning and follow-through.

(65) (B) Trisomy 21.

Down syndrome < trisomy 21) is the most common chromosomal abnormality, affecting about 1 in 800 babies.

he risk of Down syndrome increases with the mother's age.

(66) (B) Decrease calorie intake.

The most effective way to lose weight is to adopt healthy eating habits, exercise routines and stress management techniques.

Regular exercise and healthy eating are important and even modest weight loss will improve your health. It is also important to learn stress management tools that can be used in place of overeating or snacking during stressful times.

(67) (C) Verifying the diagnosis.

investigating an outbreak, speed is essential, but getting the right answer is essential, too.

To satisfy both requirements, epidemiologists approach investigations systematically, using the following 10 steps:

Prepare for field work.

2- Establish the existence of an outbreak.

- Verify the diagnosis.

Define and identify cases.

- Describe and orient the data in terms of time, place and person.

6- Develop hypotheses.

Evaluate hypotheses.

3- Refine hypotheses and carry out additional studies.

- Implement control and prevention measures.

10- Communicate findings.

(68) (A) Hypertension and Obesity.

- Diabetes has long been linked to obesity and being overweight.

Research showed that the single best predictor of diabetes mellitus type 2 is being obese or overweight. Note that hypertension, or high blood pressure a significant risk factor in the development of diabetes mellitus type 2.

any factors like obesity, diet, stress, occupation, which are considered more important in the western and urban studies, were not found to be significant in this rural area, whereas strong genetic factors, tobacco use, less physical activity and systolic hypertension emerged as strong risk factors.

(69) (A) Sensitivity.

- A Sensitivity (also called the true positive rate, or there call rate in some fields) measures he proportion of actual positives which are correctly identified as such (e.g. the percentage of sick people who are correctly identified as having the condition).

(70) (A) $[A/(A+B)] / [C/(C+D)]$.

- **Relative risk:** is an epidemiological indicator resulting from Cohort study and it is the ratio of incidence of a health outcome among exposed population to the incidence of the health outcome in the non-exposed population.

(1) Incidence among exposed = $A / A+B$.

A - Exposed patient who developed disease.

A+B = All exposed population.

(2) Incidence among non-exposed = $C / C+D$.

C = Non-exposed with the disease.

C+D = All non-exposed population.

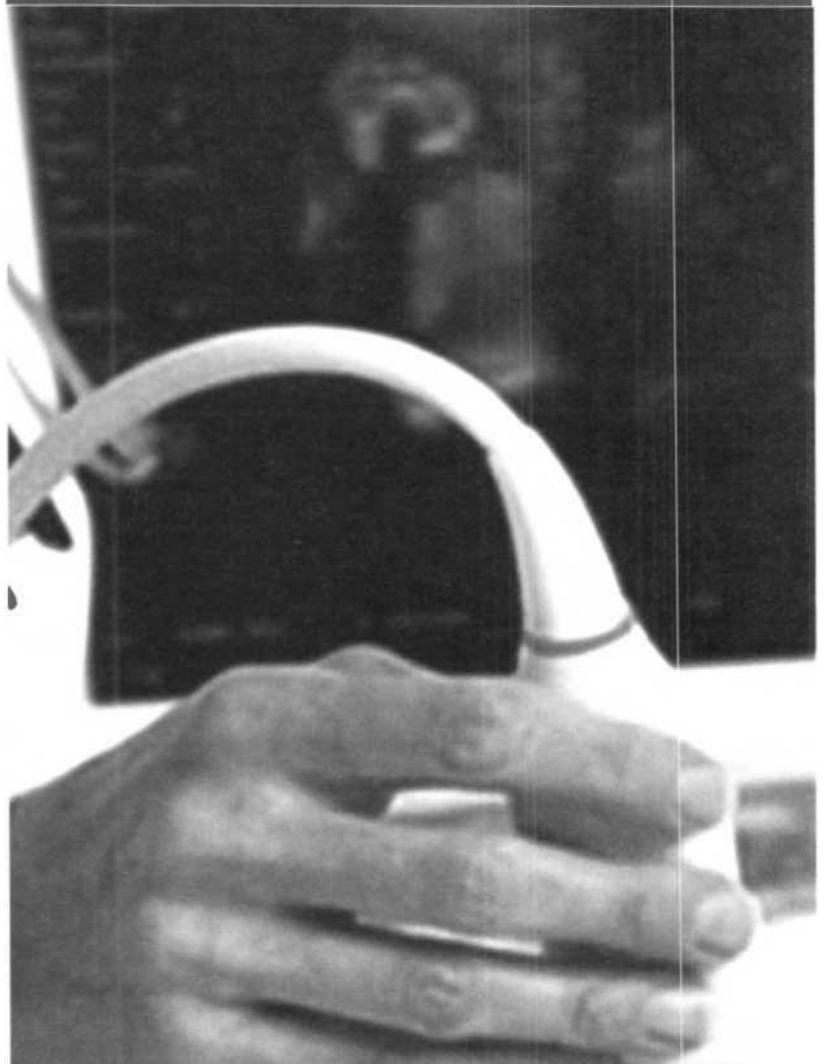
(71) (A) Cognitive and behavioral therapy.

- **Cognitive behavioral therapy is effective in these cases.**

- **Pharmacotherapy has high success rates.**

v.

OBSTETRICS AND GYNECOLOGY



- (1) Pregnant female is HIV positive, what is the most likely mode of transmission to the baby?
- (A) Through the placenta.
 - (B) Through the blood cord.
 - (C) Through hand contamination of mother.
 - (D) By breastfeeding.
- (2) A female patient presented to the clinic with tremors, fatigue, irritability, nervousness, palpitations and heat intolerance. She has a 6-month-old baby. Which of the following is most likely the diagnosis?
- (A) Postpartum thyroiditis.
 - (B) Hyperthyroidism.
 - (C) Subacute thyroiditis.
 - (D) Hypothyroidism.
- (3) A pregnant woman at 36 weeks gestational age presented with 7 cm cervical width at 0 station. During birth CTV shows late deceleration. What is the management?
- (A) Give oxytocin.
 - (B) Give oxygen and change the mother's position.
 - (C) Give magnesium sulfate.
 - (D) Cesarean section.
- (4) Which one of the following conditions is not associated with increased alpha-fetoprotein?
- (A) Neural tube defects.
 - (B) Down syndrome.
 - (C) Gastroschisis.
 - (D) Multiple gestations.
- (5) A pregnant woman presented with low back pain and all gynecologic causes are ruled out. What is the treatment?
- (A) Acetaminophen.
 - (B) Ibuprofen.
 - (C) Diclofenac.
 - (D) Aspirin.
- (6) A pregnant woman with 34 weeks gestational age presented with breech presentation. What is the management?
- (A) Wait until 36 weeks.
 - (B) Do external cephalic version.
 - (C) Cesarean section.
 - (D) Induce labor.
- (7) A mother delivered her first baby with cleft lip and palate. What is the percentage of recurrence for her next pregnancy?
- (A) 1%.
 - (B) 4%.
 - (C) 15%.
 - (D) 20%.

- (8) A mother delivered her first baby with anencephaly. What is the chance of having the same condition in her second baby?
- (A) 2%.
 - (B) 10%.
 - (C) 25%.
 - (D) 50%.
- (9) A female patient suffered from a postpartum hemorrhage. After massage, oxytocin and ergometrine, she still bleeds. What is the next step in management?
- (A) Hysterectomy.
 - (B) Ligate internal iliac artery.
 - (C) Brace suturing of uterus.
 - (D) Blood transfusion.
- (10) What is the treatment of hyperthyroidism in pregnant women?
- (A) Propylthiouracil.
 - (B) Methimazole.
 - (C) Beta-blockers.
 - (D) Radioactive iodine.
- (11) A 48-year-old female has not menstrated for 2 cycles. The method of contraception used is condoms. On examination, everything is normal except for dusky discoloration of the cervix. What is the next step of investigation?
- (A) Progesterone challenge.
 - (B) Beta-hCG.
 - (C) Pelvic US.
 - (D) Urine pregnancy test.
- (12) Which heart condition is tolerable during pregnancy?
- (A) Eisenmenger syndrome.
 - (B) Aortic stenosis.
 - (C) Mitral regurgitation.
 - (E) Mitral stenosis.
- (13) What is the most accurate method to determine the gestational age?
- (A) US.
 - (B) Last menstrual period.
 - (C) Beta hCG.
 - (D) Mother's weight.
- (14) What is the treatment of scabies in pregnant women?
- (A) Permethrin 5% dermal cream.
 - (B) Benzyl benzoate.
 - (C) Crotamiton.
 - (D) Malathion.

- (15) A female presents with positive urine pregnancy test at home. What is the next step?
- (A) Serum hCG.
 - (B) Abdominal US.
 - (C) CBC.
 - (D) Repeat urine pregnancy test.
- (16) Which of following is true regarding pregnancy?
- (A) Use of anti-thyroid drugs increases the incidence of congenital anomalies.
 - (B) Gastroesophageal reflux disease increases the incidence of iron deficiency anemia.
 - (C) 15 % of pregnant women will have depression at some time, pre- or postpartum.
 - (D) Serum hCG can be demonstrated in maternal plasma by 8-9 days after ovulation.
- (17) A pregnant women in labor suffers from severe pain and dilated cervix but all of the manifestations are within normal parameters. What is the type of analgesia should be used?
- (A) Epidural analgesia.
 - (B) Spinal analgesia.
 - (C) Systemic analgesia.
 - (D) General anesthesia.
- (18) What is the effect of drinking alcohol during pregnancy?
- (A) It can cause fetal alcohol syndrome.
 - (B) There is no effect on the baby.
 - (C) It only causes problems if combined with smoking.
 - (D) None of the above.
- (19) Which one of the following changes will occur during pregnancy?
- (A) Increase tidal volume.
 - (B) Decrease tidal volume.
 - (C) Increase total lung capacity.
 - (D) Increase functional residual capacity.
- (20) A pregnant woman with 18 weeks of gestational age presented with tachycardia and severe vomiting. On examination, she has increased blood pressure. On investigations, her thyroid function test showed increased thyroxine binding globulin, increased total thyroid hormone, normal free thyroid hormone and TSH and an increased beta-hCG. What is the most common cause of this result?
- (A) Pregnancy.
 - (B) Compensated euthyroidism.
 - (C) Subacute thyroiditis.
 - (D) Hyperthyroidism.
- (21) A pregnant woman presented with signs and symptoms of suspected DVT. What is the best initial investigation?
- (A) Duplex US.
 - (B) D-dimer.
 - (C) CT scan.
 - (D) Venogram.

(22) A pregnant woman with 2 months gestational age presented with severe vomiting (hyperemesis) and vaginal bleeding with pelvic pain. On examination, the uterus is larger than suspected. On investigations, beta-hCG is very high. What is the most likely diagnosis?

- (A) Endometrial cancer.**
- (B) Gestational trophoblastic disease.**
- (C) Cervical cancer.**
- (D) Ovarian cancer.**

(23) During the third trimester of pregnancy, all of the following changes occur normally except

- (A) Decrease in WBCs.**
- (B) Reduced gastric emptying rate.**
- (C) Diminished residual lung volume.**
- (D) Diminished pelvic ligament tension.**

(24) A pregnant woman presented to the ER with blood gushing from the vagina due to abdominal trauma. What is the most likely diagnosis?

- (A) Abrupto placenta.**
- (B) Placenta previa.**
- (C) Contusion of uterus.**
- (D) Injury to fetus.**

(25) Which one of the following can lead to polyhydramnios?

- (A) Duodenal atresia.**
- (B) Renal agenesis.**
- (C) Postterm pregnancy.**
- (D) Intrauterine growth restriction.**

(26) A 42-year-old pregnant woman visits the clinic during her second trimester asking to do screening to detect Down syndrome. What is the best method?

- (A) Amniocentesis.**
- (B) Chorionicentesis (chorionic villous sampling).**
- (C) Cordocentesis (umbilical cord blood sampling).**
- (D) Triple screen.**

(27) A female patient complains of severe migraines that affect her work. She mentioned that her migraines improved during her last pregnancy. What is the best thing to prevent her migraine?

- (A) Biofeedback.**
- (B) Acetaminophen.**
- (C) Propranolol.**
- (D) Ibuprofen.**

(28) A pregnant woman with 41 weeks of gestational age did not complain of anything. On examination, she had mild hypertension and her biophysical profile showed oligohydramnios. What is the appropriate management?

- (A) Wait for spontaneous vaginal delivery to occur.**
- (B) Induce labor after 42 weeks.**
- (C) Induce labor now.**
- (D) Do biophysical profile twice weekly.**

- (29) A pregnant woman underwent US which showed anteriolateral placenta. On vaginal examination, the examiner's finger cannot reach the placenta. What is the type of this placenta?
- (A) Placenta previa totalis.
 - (B) Placenta previa marginalis.
 - (C) Placenta previa partialis.
 - (D) Normal placenta.
- (30) Which drug is contraindicated for treatment of urinary tract infection in pregnant women?
- (A) Ampicillin.
 - (B) Nitrofurantoin.
 - (C) Fluoroquinolone.
 - (D) Cephalexin.
- (31) Which antibiotic is safe for a pregnant woman who has no known sensitivity to any drug?
- (A) Tetracycline.
 - (B) Ampicillin.
 - (C) Chloramphenicol.
 - (D) Sulfonamide.
- (32) What is a contraindication of methylergometrine (Methergine)?
- (A) Maternal hypertension.
 - (B) Pulmonary edema.
 - (C) Bronchial asthma.
 - (D) DVT.
- (33) What is the best diagnostic test for endometriosis?
- (A) US.
 - (B) Laparoscopy.
 - (C) Laparotomy.
 - (D) MRI.
- (34) A young female patient presented by pain during the first 2 days of menses. Her menarche was 2 years back. What is the initial treatment?
- (A) Oral contraceptive pills.
 - (B) NSAIDs.
 - (C) Aspirin.
 - (D) Self-limited, no medication is required.
- (35) A 19-year-old woman complains of abdominal pain within the first two days of her menstruation cycle. There is no finding in her full examination and investigations. What is the diagnosis?
- (A) Primary dysmenorrhea.
 - (B) Secondary dysmenorrhea.
 - (C) Endometriosis.
 - (D) Polycystic ovary syndrome.

- (36) An elderly female presented with itching of the vulva with no discharge. On examination her vagina is pale and thin. What is the management?
- (A) Estrogen cream.
 - (B) Progesterone cream.
 - (C) Corticosteroid cream.
 - (D) Fluconazole cream.
- (37) A female patient was diagnosed recently with epilepsy and phenobarbitone was prescribed for her. She lactates her child 3 times/day. Which of the following is true?
- (A) Stop lactation immediately.
 - (B) Stop lactation after 3 weeks.
 - (C) Lactate 8 hours after each dose.
 - (D) Continue the feeding.
- (38) Which statement is true regarding MMR vaccine in a lactating mother?
- (A) MMR vaccine has live attenuated bacteria.
 - (B) Discontinue breast feeding for 72 hours after the vaccination.
 - (C) MMR vaccine can be taken safely while breastfeeding
 - (D) MMR vaccine is contraindicated in a lactating mother.
- (39) A 52-year-old woman complains of hot flushes, dry vagina, loss of libido, loss of concentration and weight gain. What is the treatment?
- (A) Estrogen.
 - (B) Progesterone.
 - (C) Fluoxetine.
 - (D) Steroid.
- (40) Which one of following is contraindication of breastfeeding?
- (A) Chemotherapy.
 - (B) Anti-convulsion drugs.
 - (C) After DT vaccine.
 - (D) Smoking.
- (41) What is the absolute contraindication of breastfeeding?
- (A) Asymptomatic HIV infection.
 - (B) Active hepatitis C.
 - (C) Veneral wart.
 - (D) TB treated for 3 months.
- (42) A lactating woman presented with breast engorgement and tenderness. What is the management?
- (A) Warm compressor and continue breastfeeding.
 - (B) Didoxacillin and continue breastfeeding.
 - (C) Didoxacillin and milk expression.
 - (D) Discontinue breastfeeding and cold compressor.

(43) What is the best stimulant for breast milk secretion?

- (A) Breast feeding.**
- (B) Oxytocin.**
- (C) Visual stimulation.**
- (D) Psychogenic stimulation.**

(44) A 30-year-old woman is para 3 with a history of dilatation and curettage after her second delivery. She is complaining of amenorrhea. Investigation showed high follicle stimulating hormone and luteinizing hormone with low estrogen. What is the diagnosis?

- (B) Asherman's syndrome.**
- (C) Primary ovarian failure.**
- (D) Premature ovarian failure.**
- (E) Polycystic ovary syndrome.**

(45) Patient complains of irregular menstruation with excessive facial hair. She is obese with a BMI =36. Her mother has the same condition. Investigation showed normal estrogen, increased testosterone, increased luteinizing hormone, decreased follicle stimulating hormone. Her urine showed 17-hydroxysteroid. What is the diagnosis?

- (A) Cushing syndrome.**
- (B) Polycystic ovary syndrome.**
- (C) Adrenal adenoma.**
- (D) Hypothyroidism.**

(46) What is true regarding female puberty comparing with male puberty?

- (A) Female puberty is 6-12 months earlier than male puberty.**
- (B) Female puberty is 2-3 years earlier than male puberty.**
- (C) Female puberty and male puberty occurs at the same age.**
- (D) Male puberty is earlier than female puberty.**

(47) What is the most common cause of precocious puberty of female?

- (A) Idiopathic.**
- (B) Adrenal tumor.**
- (C) Brain tumor.**
- (D) Ovarian tumor.**

(48) A 34-year-old woman presented with pelvic pain and menorrhagia. Also she has a history of infertility. On examination, the uterus was of normal size and retroverted. She had multiple small tender nodules palpable in the uterosacral ligament. What is the most likely diagnosis?

- (A) Endometritis.**
- (B) Endometriosis.**
- (C) Adenomyosis.**
- (D) Pelvic inflammatory disease.**

- (49) A pregnant woman with a known case of uterine fibroids presented with abdominal pain with no other symptoms. On investigation, US showed a live fetus. What is the management?
- (A) Myomectomy.
 - (B) Hysterectomy.
 - (C) Pain management.
 - (D) Pregnancy termination.
- (50) Which one of the following is true about uterine fibroid in pregnancy?
- (A) It presents with severe anemia.
 - (B) It is likely to regress after pregnancy.
 - (C) It needs immediate surgery.
 - (D) It presents with antepartum hemorrhage.
- (51) How long after menarche does the spinal length stop growing?
- (A) 6 months.
 - (B) 1 years.
 - (C) 2 years.
 - (D) 3 years.
- (52) A female patient has primary amenorrhea, short stature, webbed neck and low hairline. What is the most likely diagnosis?
- (A) Turner syndrome.
 - (B) Cushing syndrome.
 - (C) Down syndrome.
 - (D) Klinefelter syndrome.
- (53) What is the major health problem in menopause?
- (A) Depression.
 - (B) Osteoporosis.
 - (C) Endometrial carcinoma.
 - (D) Breast cancer.
- (54) A young woman presented with history of cyclical metromenorrhagia. She has never used any kind of contraceptives before. What is the management?
- (A) Ibuprofen.
 - (B) Oral contraceptive pills.
 - (C) Danazol.
 - (D) Acetaminophen.
- (55) What is the non-hormonal drug is used to decrease hot flush in postmenopausal women?
- (A) Paroxetine.
 - (B) Captopril.
 - (C) Ibuprofen.
 - (D) Only hormonal treatment is effective.

(56) Which of the following is true about secondary dysmenorrhea?

- (A) It is due to anovulation.**
- (B) It is due to gonadal agenesis.**
- (C) It is always pathological.**
- (D) It is a part of Sheehan syndrome.**

(57) CA-125 is a tumor marker. Which cancer it is mostly used for it?

- (A) Ovarian cancer.**
- (B) Cervical cancer.**
- (C) Breast cancer.**
- (D) Uterine cancer.**

(58) A postpartum woman complains of passage of flatus and stool through the vagina.

What is the diagnosis?

- (A) Anal fistula.**
- (B) Rectovaginal fistula.**
- (C) Ureterovaginal Fistula.**
- (D) Vesicovaginal fistula.**

(59) What is the drug that comparable to laparoscopy in ectopic pregnancy?

- (A) Methotrexate.**
- (B) Hydroxyurea.**
- (C) Mefipristone.**
- (D) Oral contraceptive pills agents.**

(60) A patient presented with abdominal pain. She gave history of 3 weeks amenorrhea. On examination, laparoscopy found blood in the pouch of Douglas. What is the cause of this bleeding?

- (A) Rupture of ectopic pregnancy.**
- (B) Ovarian cyst.**
- (C) Spontaneous or threatened abortion.**
- (D) Appendicitis.**

(61) What is the management of ectopic pregnancy in the fallopian tube?

- (A) Wait and observe.**
- (B) *Laparotomy.***
- (C) Laparoscopy.**
- (D) Dilatation and curettage.**

(62) What is the most common site of ectopic pregnancy?

- (A) Fallopian tubes.**
- (B) Ovaries.**
- (C) Cervix.**
- (D) Abdomen.**

(63) What is the likeliest cause of bleeding after dilatation and curettage?

- (A) Asherman syndrome.**
- (B) Missed disease.**
- (C) Perforated uterus.**
- (D) Infection.**

(64) A young woman presented with history of heavy vaginal bleeding. She is diagnosed as having dysfunctional uterine bleeding. What is the management?

- (A) Combined oral contraceptive pills.**
- (B) Hospitalization and blood transfusion.**
- (C) Hysterectomy.**
- (D) Dilatation and curettage.**

(65) A female patient presented with history of cyclic abdominal pain, inability to conceive and heavy menses. On examination, there is tenderness and nodularity in the uterosacral ligaments. What is the diagnosis?

- (A) Endometriosis.**
- (B) Ovarian cysts.**
- (C) Pelvic inflammatory disease.**
- (D) Mullerian anomalies.**

(66) What is the most common symptom in placenta abruption?

- (A) Vaginal bleeding.**
- (B) Uterine tenderness.**
- (C) Uterine contractions.**
- (D) Fetal distress.**

(67) A female patient complains of irregular menstrual cycle. It comes every other month and lasts 7-8 days with a very heavy bleeding. What is the best description for her menstrual cycle?

- (A) Menorrhagia.**
- (B) Polymenorrhea.**
- (C) Metrorrhagia.**
- (D) Menometrorrhagia.**

(68) A female patient complains of increase frequency of menstrual cycle. What is the best description for her menstrual cycle?

- (A) Polymenorrhea.**
- (B) Hypermenorrhea.**
- (C) Menorrhagia.**
- (D) Dysmenorrhea.**

(69) A pregnant woman with 16 weeks gestational age presented with vaginal bleeding, enlarged abdomen and vomiting. Her uterus is smaller than expected for the gestational age. The US has a snowstorm appearance. What is the diagnosis?

- (A) Complete hydatiform mole.
- (B) Partial hydatiform mole.
- (C) Endometriosis.
- (D) Fibroids imaging findings.

(70) A menopausal woman complains of bleeding not associated with intercourse. What is the treatment?

- (A) Estrogen.
- (B) Progesterone.
- (C) Dilatation and curettage.
- (D) Hysterectomy.

(71) Dysfunctional uterine bleeding is most common in:

- (A) Post menopausal women.
- (B) Adolescents.**
- (C) Women of reproductive age.
- (D) All ages have the same chance of dysfunctional uterine bleeding.

(72) A 54-year-old female presented with chronic pelvic pain. By investigation, she is found to have a right-sided ovarian mass. Surgery is planned to remove the mass and to avoid excessive bleeding during the surgery, which ligament should be ligated?

- (A) Round ligament.
- (B) Suspensory ligament.
- (C) Ovarian ligament.
- (D) Transverse cervical ligament.

(73) What is the most common cause of bleeding for postmenopausal women?

- (A) Cervical polyp.
- (B) Endometrial atrophy.
- (C) Cervicitis.
- (D) Nutritional deficiency.

(74) Which one of them following is true about antepartum hemorrhage?

- (A) Antepartum hemorrhage is an indication to perform laparoscopy.
- (B) Antepartum hemorrhage remains a direct cause of maternal death in nearly 50% of cases.
- (C) Second trimester bleeding is most often associated with placental abnormalities.
- (D) Placenta previa increases with an increasing number of cesarean sections.

(75) A pregnant woman with 8 weeks gestation age presented with vaginal bleeding for the last 12 hours with lower abdominal pain. She passed tissue. On examination, the internal os was 1 cm dilated. What is the diagnosis?

- (A) Complete abortion.**
- (B) Incomplete abortion.**
- (C) Missed abortion.**
- (D) Threatened abortion**

(76) A pregnant woman with 34 weeks of gestational age presented with vaginal bleeding. Which of the following is relevant to ask about?

- (A) Smoking.**
- (B) The result of last Pap smear.**
- (C) History of vaginal irritation.**
- (D) Recent sexual intercourse.**

(77) A pregnant woman in her 8th month presented with vaginal bleeding and abdominal pain. She has a known case of hypertension. What is the most common cause of her bleeding?

- (A) Placenta previa.**
- (B) Ectopic pregnancy.**
- (C) Abruptio placenta.**
- (D) Nutritional deficiency.**

(78) Which type of contraceptive is contraindicated in lactation?

- (A) Oral contraceptive pills.**
- (B) Mini pills.**
- (C) Depo-Provera.**
- (D) Intra uterine device.**

(79) Which of the following is true regarding infertility?

- (A) It is failure to conceive within 6 months.**
- (B) Male factors are more common than female factors.**
- (C) It could be due to high prolactin levels.**
- (D) It is rarely due to anovulation.**

(80) What is an absolute contraindication of combined oral contraceptive pills?

- (A) History of previous DVT.**
- (B) Ovarian cancer.**
- (C) Cervical cancer.**
- (D) Diabetes mellitus type 2.**

(81) Oral contraceptive pills can cause changes in:

- (A) Cervical mucosa.**
- (B) Vaginal acidity.**
- (C) Tubal thickness.**
- (D) Ovum released structure.**

(82) What is true about the action of oral contraceptive pills?

- (A) It inhibits estrogen then ovulation.**
- (B) It inhibits prolactin then ovulation.**
- (C) It inhibits mid-cycle gonadotropin then ovulation.**
- (D) It increases vaginal acidity.**

(83) What is the drug used for induce ovulation?

- (A) Clomiphene.**
- (B) Estrogen.**
- (C) Progesterone.**
- (D) None of the above.**

(84) A 23-year-old woman, married for 3 months, presented to the clinic complaining of not getting pregnant. They have intercourse 3-4 times/week. She has a normal gynecologic history. Her husband is 25-year-old with a healthy weight. What is the management?

- (A) Continue trying to one year.**
- (B) Obtain sperm analysis.**
- (C) Study tubes patency.**
- (D) Perform full female hormonal assay.**

(85) A female patient complains of frothy vaginal discharge, musty odor and vaginal itching. Her partner also complains of urethral discharge. Examination shows strawberry cervix. What is the treatment?

- (A) Meconazole cream.**
- (B) Estrogen cream.**
- (C) Progesterone cream.**
- (D) Metronidazole.**

(86) What is the treatment of trichomoniasis?

- (A) Metronidazole.**
- (B) Ampicillin.**
- (C) Rifampicin.**
- (D) Ceftriaxone.**

(87) A male patient presented with joints pain. He gives history of unprotected coitus. On investigation, culture showed Gram-negative diplococcus. What is the diagnosis?

- (A) Gonorrheal arthritis.**
- (B) Nongonorrheal arthritis.**
- (C) Rheumatoid arthritis.**
- (D) Syphilis.**

(88) What is the most common site of gonorrhea infection in women?

- (A) Cervix.**
- (B) Urethra.**
- (C) Rectum.**
- (D) Pharynx.**

(89) A female patient presented with cord-like, cheesy, whitish, adherent, odorless vaginal discharge. She gives history of using an antibiotic course. What is the diagnosis?

- (A) Vulvovaginal candidiasis.**
- (B) Trichomoniasis.**
- (C) Bacterial vaginosis.**
- (D) Gonorrhea.**

(90) What is the drug of choice in treating gonorrhea?

- (A) Ceftriaxone.**
- (B) Doxycycline.**
- (C) Azithromycin.**
- (D) Metronidazole.**

(91) A 20-year-old female patient presented with vaginal discharge, dysuria, intermenstrual bleeding, dyspareunia (painful intercourse) and mild lower abdominal pain. On investigation, urethral culture show Gram-negative intracellular diplococci. What is the diagnosis?

- (A) Gonorrhea.**
- (B) Syphilis.**
- (C) Herpes simplex virus.**
- (D) Chancroid.**

(92) A female patient was diagnosed with salpingitis and managed by antibiotics. After 3 days there is no improvement. On examination, there is swelling in the pelvis in the posterior fornix, which is fluctuant. What is the treatment now?

- (A) Colpotomy.**
- (B) Laparoscopy.**
- (C) Laparotomy.**
- (D) Continue antibiotic.**

(93) A 34-year-old female was diagnosed with HIV. Her cervical Pap smear was negative. When you will repeat cervical Pap smear for her?

- (A) After 3 months, if negative repeat it after 6 months.**
- (B) After 6 months, if negative repeat it annually.**
- (C) After 1 year, if negative repeat it annually.**
- (D) None of the above.**

(94) Trichomoniasis classically has:

- (A) Clue cells.
- (B) Greenish frothy discharge.
- (C) Odorless discharge.
- (D) Pelvic pain.

(95) What is the usual treatment of mastitis for a lactating mother?

- (A) Doxycycline.
- (B) Ceftriaxone.
- (C) Cefixime.
- (D) Dicloxacillin.

(96) What is the usual treatment of mastitis for a lactating mother?

- (A) Doxycycline or dicloxacillin.
- (B) Ceftriaxone.
- (C) Cefoxime.
- (D) Metronidazole.

(97) A female presented with monilial vaginal discharge. What is the treatment?

- (A) Miconazole cream for 7 days.**
- (B) Fluconazole orally as a single dose.
- (C) Metronidazole orally for 7 days.
- (D) Nystatin cream for 7 days.

(98) A female patient presented with a thin, grey vaginal discharge with fishy odor, especially after sexual intercourse. She has no history of dyspareunia or abdominal pain. On investigation, KOH test is positive for whiff test with a pH of 5.5. What is the most likely diagnosis?

- (A) Bacterial vaginosis.
- (B) Trichomonas vaginalis.
- (C) Vaginal candidiasis.
- (D) None of the above.

(99) A diabetic mother has elevated blood sugar despite insulin injections. Which one of the following will be a complication?

- (A) Maternal hyperglycemia.
- (B) Maternal hypoglycemia.
- (C) Neonatal hypoglycemia.
- (D) Neonatal hyperglycemia.

(100) A 28-year-old diabetic female is planning to become pregnant; her blood glucose is well controlled. When must she control her metabolic state to decrease the risk of having congenital anomalies?

- (A) Before conception.
- (B) First trimester.
- (C) Second trimester.
- (D) Third trimester.

(101) What is true regarding diabetes mellitus in pregnancy?

- (A) The prevalence of diabetes mellitus in pregnancy is 10%.**
- (B) Glucose screening is best done at 24-28 weeks of gestation age.**
- (C) Diabetic and non-diabetic mothers have the same perinatal mortality rate.**
- (D) Gestational diabetes can be diagnosed by abnormal fasting glucose serum test.**

(102) What is the best medication for gestational diabetes mellitus?

- (A) Sulfonylureas.**
- (B) Metformin.**
- (C) Thiazolidinediones.**
- (D) Insulin.**

(103) After delivery, what risk for the mother is associated with gestational diabetes?

- (A) Diabetes mellitus type 1.**
- (B) Diabetes mellitus type 2.**
- (C) Impaired fasting glucose.**
- (D) There is no risk after delivery.**

(104) What is the drug used for seizures of eclamptic origin (preeclampsia)?

- (A) Magnesium sulfate.**
- (B) Diazepam.**
- (C) Phenytoin.**
- (D) Phenobarbital.**

(105) What is the drug of choice for hypertension in pregnancy?

- (A) Methyldopa.**
- (B) Labetalol.**
- (C) Nifedipine.**
- (D) Captopril.**

(106) A pregnant woman with 36 weeks gestational age visits the clinic for routine antenatal care. Her blood pressure is 150/95 mmHg, with no lower limb edema. She denied any previous abnormal reading of blood pressure. What is the next step?

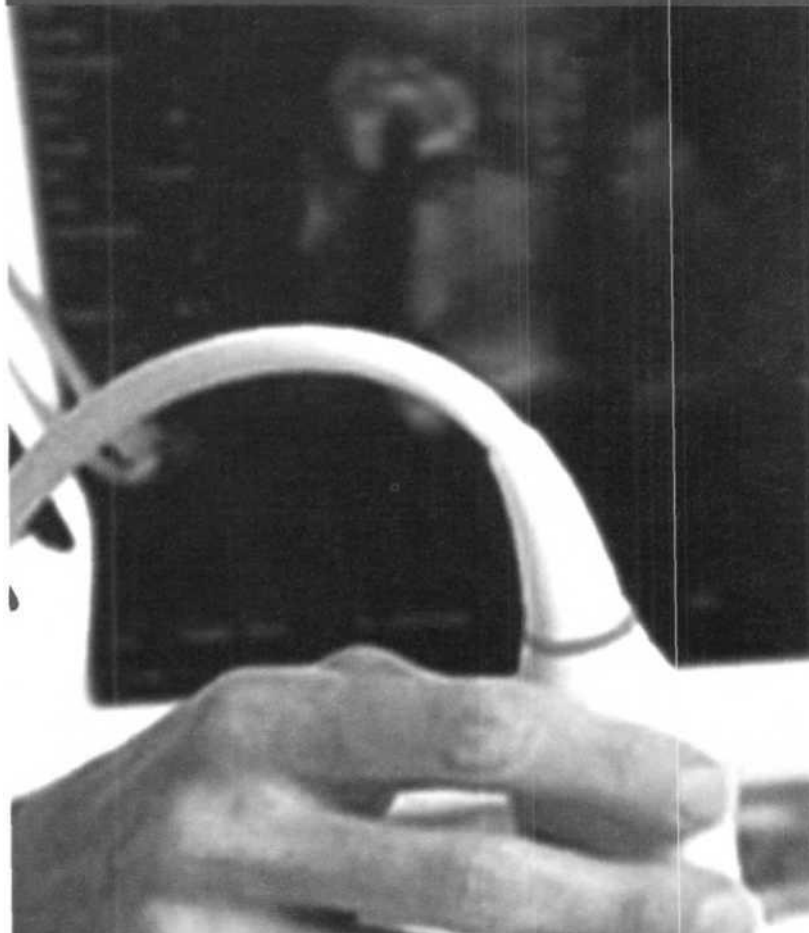
- (A) Repeat measuring of blood pressure.**
- (B) Investigate for proteinuria.**
- (C) Give magnesium sulfate.**
- (D) Give anti-hypertension medication.**

(107) A primigravida (G1 P0+0) at 13 weeks gestational age presented to the clinic with a blood pressure of 145/100 mmHg. She does not know if she has previous hypertension. The next visit, her blood pressure is 145/95 mmHg with no proteinuria. She exercises regularly 3-4 times/week. What is the most likely diagnosis?

- (A) Pre-eclampsia.**
- (B) Eclampsia.**
- (C) Chronic hypertension.**
- (D) Gestational hypertension (pregnancy induced hypertension).**

ANSWERS

OBSTETRICS AND GYNECOLOGY



(1) (D) By breastfeeding.

- HIV is transmitted from one person to another through specific body fluids: blood, semen, genital fluids and breast milk.
- Having unprotected sex or sharing needles with an HIV-infected person are the most common ways HIV is transmitted.
- An HIV-infected mother can transmit HIV to her baby during pregnancy, during labor and delivery, or by breastfeeding.
- Anti-HIV medications help prevent mother-to-child transmission of HIV.
- Because HIV can be transmitted through breast milk, HIV-infected mothers should not breastfeed their babies.

(2) (A) Postpartum thyroiditis.

- Postpartum thyroiditis is a phenomenon observed following pregnancy and may involve hyperthyroidism, hypothyroidism, or the two sequentially.
- It affects about 5% of all women within a year after giving birth.
- The initial phase of hyperthyroid symptoms occurs transiently about 2-6 months postpartum.

(3) (B) Give oxygen and change the mother's position.

- Management of late deceleration:
 - 1- Move mother to left or right lateral position.
 - 2- Give supplemental oxygen.
 - 3- Stop oxytocin (and potentially start tocolytics).
 - 4- Increase IV hydration.
 - 5- Monitor maternal blood pressure to ensure maternal hypotension is not the cause.
 - 6- Perform fetal blood sampling to assess for acidosis (if available).

Type of deceleration	Etiology	Management
Early	- Head compression from uterine contraction (normal).	. N ₆ treatment, - Place patient on side, discontinue oxytocin, correct any hypotension, increase IV hydration. - If decelerations are associated with tachysystole consider terbutaline. - Administer oxygen.
Late	- Uteroplacenta insufficiency and fetal	- If late decelerations persist for more than 30 minutes. Despite the above maneuvers, fetal scalp pH is indicated. - Scalp pH > 7.25 is reassuring; pH 7.2 - 7.25 may be repeated in 30 minutes; deliver for pH < 7.2 or minimal baseline variability with late or prolonged decelerations and inability to obtain fetal scalp pH.

- Change position to where fetal heart rate pattern is most improved.
- Trendelenburg may be helpful.

Variable - Umbilical cord compression. ' Disc0'',nue

- Check for cord prolapse or imminent delivery by vaginal examination.
- Consider amnioinfusion.

(4) (B) Down syndrome.

- Elevated serum alpha-fetoprotein indicates the following conditions:
 - 1- Neural tube defects: anencephaly and spina bifida.
 - 2- Gastroschisis: abdominal wall defect, often lateral to the rectus on the right.
 - 3- Omphalocele: midline umbilical hernia covered by peritoneum.
 - 4- Multiple gestations, when there is placental abruption.
 - 5- Ovarian tumor.
- Decreased serum alpha-fetoprotein indicates the following conditions:
 - 1- Down syndrome.
 - 2- Trisomy 18.
 - 3- Diabetic patients.

(5) (A) Acetaminophen.

- Acetaminophen is considered safe during pregnancy; it can be used during all three trimesters of pregnancy.
- NSAIDs are not recommended during pregnancy, particularly during the third trimester, while NSAIDs as a class are not direct teratogens, they may cause premature closure of the fetal ductus arteriosus and renal adverse drug reactions in the fetus, additionally; they are linked with premature birth and miscarriage.

(6) (A) Wait until 36 weeks.

- External cephalic version is done after 36 weeks.
- Though it can be done at 34 weeks, it is less safe because of the tendency for the premature fetus to revert spontaneously to a breech presentation.

(7) (B) 4%.

- If this is first child with cleft, the overall risk for another sibling or offspring is 4%.
- If more than one family member is affected, the overall risk for another sibling or offspring is 10-16%.

(8) (A) 2%.

- If a previous baby was affected, the recurrence rate is 4%.
- If 2 previous babies were affected, the recurrence rate is 10%.

(9) (B) Ligate internal iliac artery.

- The sequence of surgical interventions is:

- 1 - Repair trauma if any.**
- 2 - Uterine artery ligation.**
- 3 - Utero ovarian artery ligation.**
- 4 - Internal iliac artery ligation.**
- 5 - Brace suturing of uterus.**
- 6 - Hysterectomy.**
- 7 - Angiographic embolisation.**

(10) (A) Propylthiouracil.

Treatment of hyperthyroidism in pregnancy is propylthiouracil 50 mg twice daily.

Methimazole readily crosses the placental membranes and can induce goiter and cretinism in the developing fetus.

Beta-blockers may be given to ameliorate the symptoms of moderate to severe hyperthyroidism in pregnant women. Low-dose atenolol may be appropriate to begin.

Radioactive iodine is absolutely contraindicated as it can cause fetal goiter.

Thyroidectomy during pregnancy may be necessary in women who cannot tolerate thionamides because of allergy or agranulocytosis.

(11) (B) Beta-hCG.

There are 2 common types of hCG tests.

- 1 A qualitative hCG test detects if hCG is present in the blood.**
- 2- A quantitative hCG test (or beta-hCG) measures the amount of hCG actually present in the blood.**

(12) (C) Mitral regurgitation.

Mitral regurgitation is a well-tolerated heart disease during pregnancy unless the regurgitation is severe.

(13) (A) US.

- The most accurate test is the US, which measures the size of the gestational sac and the length between crown and rump to determine the age of the fetus in weeks

US are most accurate for dating purposes before 12 weeks of pregnancy.

(14) (A) Permethrin 5% dermal cream.

Permethrin is the treatment of choice of scabies in pregnancy.

Only a small amount is absorbed through the skin and this is rapidly detoxified without retention in the body.

(15) (A) Serum hCG.

- Detection of hCG in the serum or urine is the basis of contemporary pregnancy tests.

serum hCG assays are the most sensitive test and are able to detect pregnancy within 8-12 days of ovulation (after the embryo has implanted).

Urine hCG assays are not as sensitive, but can still detect hCG within 14 days of ovulation.

(16) (D) Serum hCG can be demonstrated in maternal plasma by 8-9 days after ovulation.

- **A hCG is produced in the earliest stages of pregnancy.**
- **During early pregnancy it plays a role in survival of the corpus luteum and in stimulating the thyroid gland and it also appears to have a significant role in the implantation of the blastocyst and protection of the embryo against immune attack at the fetal/maternal boundary.**
- **The serum hCG test is the most sensitive and specific and the hormone can be detected in both blood and urine by about 8-9 days after conception.**
- **This test can be performed quantitatively or qualitatively.**
- **Urine pregnancy tests differ in their sensitivity and specificity, which are based on the hCG units set as the cutoff for a positive test result, usually 2-5 mIU/ml.**

(17) (A) Epidural analgesia.

- **Epidural analgesia, sometimes called an epidural block, causes some loss of feeling in the lower areas of the body, though the patient remains awake and alert. An epidural block may be given soon after the contractions start or later as the labor progresses.**
- **Spinal analgesia is like an epidural analgesia, but it lasts only 1-2 hours.**
- **Systemic analgesics are not given right before delivery because they may slow the baby's reflexes and breathing at birth.**
- **General anesthesia often is used when regional analgesia is not possible or is not the best choice for medical or other reasons. It can be started quickly and causes a rapid loss of consciousness. Therefore it is often used when an urgent cesarean section is needed.**

(18) (A) It can cause fetal alcohol syndrome.

- **Fetal alcohol syndrome is a pattern of mental and physical defects that can develop in a fetus in association with high levels of maternal alcohol consumption during pregnancy.**

(19) (A) Increase tidal volume.

- **Tidal volume increases by 45% during pregnancy, with approximately half of the change occurring during the first trimester.**
- **Functional residual capacity begins to decrease by the 5th month of the pregnancy; this is due to elevation of the relaxed diaphragm, which occurs as the enlarging uterus enters the abdominal cavity.**

(20) (A) Pregnancy.

- **Effects of pregnancy on thyroid function:**
 - 1- **Increased total T3 and T4.**
 - 2- **Normal free T3, free T4 and TSH.**
 - 3- **Increased serum thyroglobulin.**
 - 4- **Increased renal iodide clearance.**
- **Furthermore, hCG has mild thyroid stimulating activity.**
- **Pregnancy produces an overall increase in thyroid activity, which allows the healthy individual to remain in a net euthyroid state.**

(21) (A) Duplex US.

- US with duplex and color Doppler US is the procedure of choice to detect proximal DVT, although it is highly sensitive and specific for femoral and popliteal thrombosis.
- US does not detect pelvic vein thrombosis, which may be responsible for pulmonary embolism.

(22) (B) Gestational trophoblastic disease.

- Gestational trophoblastic disease is a term used for a group of pregnancy-related tumors.
- Gestational trophoblastic disease is divided into 5 tumors: benign (hydatidiform mole), malignant (invasive mole, choriocarcinoma, placenta site trophoblastic tumor and epithelioid trophoblastic tumor).
- Gestational trophoblastic disease can simulate pregnancy because the uterus may contain fetal tissue, albeit abnormal.

This tissue may grow at the same rate as a normal pregnancy and produce hCG, a hormone which is measured to monitor fetal well-being.

- Invasive mole and choriocarcinoma are chemo-sensitive.

(23) (A) Decrease in WBCs.

- Changes occur normally in pregnancy are increased tidal volume with respiratory rate unchanged, increased RBCs mass, increased WBCs count (especially neutrophils) and increased glomerular filtration rate.

(24) (A) Abrupto placenta.

- Symptoms of abrupt placenta may include vaginal bleeding, contractions, abdominal tenderness and decreased fetal movement.

Eliciting any history of trauma, such as assault, abuse, or motor vehicle accident, is important.

(25) (A) Duodenal atresia.

- Polyhydramnios is the presence of excess amniotic fluid in the uterus.
- Causes of polyhydramnios include maternal diabetes, multiple gestations, neural tube defects (anencephaly, spina bifida), gastrointestinal anomalies (omphalocele, esophageal atresia and duodenal atresia) and hydrops fetalis.
- Oligohydramnios means a deficiency of amniotic fluid.
- Causes of oligohydramnios include intrauterine growth restriction, premature rupture of the membranes, post-maturity and renal agenesis.

(26) (A) Amniocentesis.

- During amniocentesis, a sample of the amniotic fluid surrounding the fetus is withdrawn through a needle inserted into the mother's uterus. This sample is then used to analyze the chromosomes of the fetus. This test is usually performed after 15 weeks of gestation. This test carries a 1 in 200 risk of miscarriage.
- Chorionicentesis is usually performed at 10-12 weeks. This test carries a 1 in 100 risk of miscarriage.
- Cordocentesis is used when information cannot be obtained through amniocentesis or chorionicentesis. This test carries significant risk of complications so it is typically reserved for pregnancies determined to be at high risk for genetic defect. This test carries 1-2 in 100 risk of miscarriage.
- Triple screen is a maternal blood test that measures three things called alpha-fetoprotein, hCG and accurate.

(27) (C) Propranolol.

- Propranolol (beta-blocker) decreases the frequency of migraines.
- Calcium channel blockers decrease the intensity of migraines.
- Antiepileptics decrease both the intensity and frequency of migraines.

(28) (C) Induce labor now.

- Post-term pregnancy is defined as more than 42 weeks of gestation
- Both prematurity and post-maturity increase perinatal morbidity and mortality rates.
- With post-maturity, dystocia (difficult delivery) becomes more common because of the increased size of the fetus.
- If the gestational age is known to be accurate and the cervix is favorable, labor is induced (with oxytocin, for example).
- If the cervix is not favorable or the dates are uncertain, twice weekly biophysical profiles are done.
- At 41 weeks, most obstetricians advise induction of labor.

(29) (D) Normal placenta.

- Scan of placenta position can be done at 20 weeks of gestational age by US.
- The normal positions of placenta could be: anterior, posterior, fundal and lateral (right or left).

(30) (C) Fluoroquinolone.

- Fluoroquinolone studies have not been done in humans; however, use is not recommended during pregnancy since fluoroquinolones have been reported to cause bone development problems in young animals.

(31) (B) Ampicillin.

- Some antibiotics are considered safe in pregnancy: Amoxicillin, Ampicillin, Cephalosporin, Erythromycin, Clindamycin, Penicillin and Gentamicin.
- Tetracycline can damage a pregnant woman's liver and discolor a developing baby's teeth.
- Sulfonamide has been associated with rare birth defects. Although there's no direct proof that these antibiotics cause birth defects, additional research is needed.
- Chloramphenicol used late in pregnancy has been associated with gray baby syndrome.

(32) (A) Maternal hypertension.

- Contraindication of common uterotonics includes:
- Methylergonovine: preeclampsia, gestational hypertension, or chronic hypertension.
- Oxytocin: pulmonary edema.
- Carboprost: bronchial asthma.

(33) (B) Laparoscopy.

- Endometriosis is confirmed by laparoscopy.
- US and MRI can be used, but if normal, they cannot exclude endometriosis.

(34) (B) NSAIDs.

- is a case of dysmenorrhea.

Analgesics are the best initial treatment for dysmenorrhea.

(35) (A) Primary dysmenorrhea.

Primary dysmenorrhea

onset within 6 months after menarche

Lower abdominal/pelvic pain begins with onset of menses and lasts 8-72 hours.

Pain is suprapubic, sharp and colicky, worse,

diarrhea and headache may accompany the pain.

Requiring no examination or investigations. Secondary

dysmenorrhea:

There is an underlying disease which leads to dysmenorrhea so there are findings: either examination or investigations.

(36) (A) Estrogen cream.

Vaginal itching and dryness are secondary to hormonal deficiency in perimenopausal women, they go through menopause, the most common prescription includes hormone replacement therapy or antidepressants to minimize hot flashes

Endometrial or sedronate (non-hormonal medications) to reduce bone loss and reduce the risk of fractures.

Effective estrogen receptor modulators, which mimic estrogen's beneficial effects on bone density, vaginal estrogen administered locally, to relieve vaginal itching dryness and discomfort during sexual intercourse

(37) (D) Continue the feeding.

Although antibodies are excreted in breast milk in small amounts breastfeeding is not contraindicated.

(38) (C) MMR vaccine can be taken safely while breastfeeding

MMRV vaccine has live-attenuated viruses.

It should be given to women who are not pregnant and who do not have evidence of immunity to rubella. Vaccinated women are advised to avoid conception for 28 days after administration.

The vaccine can be given safely to postpartum women who are breastfeeding. Breastfeeding does not interfere with the response to MMR vaccine and the baby will not be affected by the vaccine through breast milk.

(39) (A) Estrogen.

For postmenopausal women with moderate to severe vasomotor symptoms (and no history of breast or cardiovascular disease; short-term estrogen therapy is the treatment of choice

(40) (A) Chemotherapy.

Contraindications of breastfeeding include galactosaemia in baby, active untreated TB in mother, HTLV type 1 or 2 in mother, mother receiving diagnostic or therapeutic radioactive isotopes > 48 hours exposure to radioactive materials mother receiving antineoplastic or other chemotherapeutic substances abusing drugs herpes lesions on mother's breast (though baby may feed from unaffected breast)

He should be free from lesions or HIV positive mother.

(41) (A) Asymptomatic HIV infection.

- Maternal infection with hepatitis B and C virus is not a contraindication to breastfeeding, as opposed to HIV infection and galactosemia.
- Transmission of HIV by breastfeeding is well documented
- Thus, if safe alternatives are available, breastfeeding by HIV infected mothers is not recommended.

(42) (A) Warm compressor and continue breastfeeding.

- This is a case of engorgement of the breast, which is managed by warm compressor.
- If there is redness, swelling and fever, this would be a case of mastitis, which is managed by antibiotics (dicloxacillin)

(4B) (A) Breastfeeding.

- Because of this, it is recommended to begin feeding as soon as possible after birth.
- Even if there is no milk at initiation of feeding, it will come due to the stimulation of feeding.

(44) (D) Premature ovarian failure.

- Premature ovarian failure presents with menstrual irregularity.
- Typical symptoms of premature ovarian failure include hot flushes and night sweats.
- Diagnosis of premature ovarian failure is made by elevated follicle stimulating hormone and low estrogen in the setting of amenorrhea.
- In primary ovarian failure, the girl never begins menstruation.
- In polycystic ovary syndrome, there is infertility due to lack of ovulation.

(45) (B) Polycystic ovary syndrome.

- Women with polycystic ovarian syndrome have abnormalities in the metabolism of androgens and estrogen and in the control of androgen production.
- The major features of polycystic ovary syndrome include menstrual dysfunction, anovulation and signs of hyperandrogenism.
- Other signs and symptoms of polycystic ovary syndrome may include the following: hirsutism, infertility, obesity and metabolic syndrome, diabetes and obstructive sleep apnea.
- The follicle stimulating hormone level should be checked to rule out primary ovarian failure.
- In patients with polycystic ovary syndrome follicle stimulating hormone levels are within the reference range or low.
- Luteinizing hormone levels are elevated for Tanner stage, sex and age.
- The luteinizing hormone -to- follicle stimulating hormone ratio is usually greater than 3.
- Stimulation testing with a long-acting gonadotropin-releasing hormone agonist induces a characteristic rise in ovarian-derived 17-hydroxyprogesterone after 24 hours.
- This is thought to be a result of excessive 17-hydroxylase activity.

(46) (B) Female puberty is 2-3 years earlier than male puberty.

- The average age of onset of puberty in female is 9-year-old.
- Once female puberty is initiated, it proceeds over an average of 4-5 years and culminates in the onset of menses.
- Increasing production of luteinizing hormone and follicle-stimulating hormone, as well as other factors (such as leptin), is responsible for the initiation of the pubertal process.

(47) (A) Idiopathic.

Precocious puberty is typically defined as the appearance of any sign of secondary sexual maturation in

boys younger than 9-year-old, in white girls younger than 7-year-old and in black girls younger than 6-year-old

Most cases of precocious puberty are idiopathic

(48) (B) Endometriosis.

A patient may have endometriosis without the presence of any symptoms

Physical findings or endometriosis may include multiple tender nodules palpable along the uterosacral ligament at the time of vaginal rectal examination. Endometriosis may be associated with an abnormally enlarged cystic

ovary-

(49) (C) Pain management.

Medication for fibroids during pregnancy is not necessary

Management of fibroids during pregnancy is localized pain typically between the first and third trimester

usually treated with pain relievers.

(50) (B) It is likely to regress after pregnancy.

Fibroids can dramatically increase in size during pregnancy

because of the increase in estrogen levels during pregnancy

and fibroids usually shrink back to their pre-pregnancy size.

After menopause when the level of estrogen decreases dramatically, even menopausal women who are taking supplemental estrogen may not experience relief of symptoms

(51) (C) 2 years.

Primary hypothyroidism usually occurs 1-5 years after menarche; in girls is a 18-year-old in boys

(52) (A) Turner syndrome.

It is important to note that an individual may have any combination of symptoms but would be unlikely to have all symptoms.

Approximately 95% of individuals with Turner syndrome have short stature and signs of ovarian failure.

■ Features of Turner syndrome include short stature, lymphedema (swelling) of the hands and feet, broad chest with widely spaced nipples. Low hairline, low-set ears, reproductive sterility, rudimentary ovaries, gonadotropins (underdeveloped gonadal structures that become fibrosed), amenorrhea or absence of a menstrual period and a high arched palate.

(53) (B) Osteoporosis.

Osteoporosis may be a primary disease state resulting from estrogen deficiency or aging or may be secondary to other disease conditions, or medications that affect calcium and bone metabolism - It is a silent disease becoming symptomatic only when fractures have occurred.

(54) (B) Oral contraceptive pills.

- Metromenorrhagia can be treated via conventional medical or surgical methods
 - The selection of treatment often depends on the cause and severity of the metromenorrhagia.
 - 1- If metromenorrhagia is the result of conditions amenable to medical treatment (such as a thyroid disorder), then control of these conditions may decrease the bleeding.
 - 2- If the patient has irregular cycles (for example, because of lack of ovulation), then hormones such as oral contraceptive pills or medroxyprogesterone may be used to regulate the cycles and decrease menstrual flow.
 - 3- A patient who is nearing the menopause can receive hormone injections that place her into an earlier artificial menopause eliminating menstrual bleeding altogether.
 - 4- If the patient encounters acute and profuse bleeding then high-dose estrogens may be given
 - 5- If metromenorrhagia is resistant to medical management, then surgical treatment may be necessary.
- Examples of procedural Treatments for metromenorrhagia are dilation and curettage, for acute profuse bleeding; thermal ablation of the endometrial lining* hysteroscopic resection of endometrial polyps or fibroids; and placement of a progesterone-impregnated intrauterine device. Hysterectomy is the definitive surgery for metromenorrhagia no matter what the cause, since menstrual bleeding cannot occur without the uterus

(55) (A) Paroxetine.

- Paroxetine is an antidepressant drug of the selective serotonin re-uptake inhibitors type
- It is most commonly used in the treatment of depression and some personality disorders.
- It has been found effective in alleviating hot flashes w dose paroxetine mesylate is used for the treatment of moderate to severe vasomotor symptoms (e.g hot flashes and night sweats) associated with menopause.

(56) (C) It is always pathological.

- Secondary dysmenorrhea may present at any time after menarche, but it most commonly arises when a woman is in her 20s or 30s, after years of normally relatively painless cycles
- Elevated prostaglandins may also play a role in secondary dysmenorrhea but, by definition, concomitant pelvic pathology must also be present
- Common causes include endometriosis, leiomyomata (fibroids), adenomyosis pelvic inflammatory disease and intrauterine device use.

(57) (A) Ovarian cancer.

- CA-125 is the most frequently used biomarker for ovarian cancer detection.
- Around 90% of women with advanced ovarian cancer have elevated levels of CA-125 in their blood serum making CA-125 a useful tool for detecting ovarian cancer after the onset of symptoms.

(58) (B) Rectovaginal fistula.

- A rectovaginal fistula is a medical condition where there is a fistula or abnormal connection between the rectum and the vagina.
- Rectovaginal fistulae are often the result of trauma during childbirth.

(59) (A) Methotrexate.

Methotrexate is a chemotherapeutic agent, that has been used successfully to treat small, ruptured ectopic pregnancies.

It is as good an approach as the advantage of avoiding surgery but the patient must be counseled that it may take 3-4 weeks for the ectopic pregnancy to resolve with methotrexate therapy.

(60) (A) Rupture of ectopic pregnancy.

The classic clinical triad of ectopic pregnancy is as follows abdominal pain, amenorrhea, and vaginal bleeding. Unfortunately, only about 50% of patients present with all 3 symptoms, therefore patients who are hemodynamically unstable should proceed to laparoscopy. Approximately 20% of patients with ectopic pregnancies are hemodynamically compromised at initial presentation, which is highly suggestive of rupture.

(61) (C) Laparoscopy.

Laparoscopy may be performed to confirm the diagnosis of ectopic pregnancy and to remove the abnormal gestation via salpingectomy or salpingostomy.

(62) (A) Fallopian tubes.

Most ectopic pregnancies occur in the Fallopian tube. 80% of these occur in the ampulla region of the tube. About 10% occur in the isthmus region and about 5% in the infundibulum region. Only about 1% occurs in the interstitial portion of the Fallopian tube. 1% occurs on ovaries, 1% occurs in the cervix, and 1% occurs in the abdomen with possible adherence to the peritoneum, viscera surfaces, or omentum.

(63) (C) Perforated uterus.

Heavy bleeding may occur due to a perforation of the uterus during surgery. Sharp metal instruments can puncture the uterus or other internal organs. In some cases, bleeding occurs after dilatation and curettage due to hemorrhage or infection.

(64) (A) Combined oral contraceptive pills.

The cause of the abnormal bleeding should determine the treatment options available to the patient.

Hormonal or mechanical conditions causing the bleeding should be addressed;

structural causes are often addressed surgically (as in the case of fibroids, polyps, or cancers) but conservative therapies may also be appropriate.

These treatment options are discussed elsewhere. Patients with structural hormonal causes of their abnormal bleeding may need multiple or sequential therapies.

(65) (A) Endometriosis.

Endometriosis usually presents with dysmenorrhea, pain with ovulation, chronic pelvic pain, dyspareunia and infertility.

It can be associated with urinary and gastrointestinal symptoms.

(66) (A) Vaginal bleeding.

- The clinical presentation of abruption includes vaginal bleeding, abdominal pain and uterine contractions.
- The severity of the clinical presentation is variable.
- In partial placental abruption, there is no maternal or fetal compromise.
- In complete placental abruption with profuse bleeding, expect signs of maternal DIC and a stillbirth.

(67) (D) Menometrorrhagia.

(68) (A) Polymenorrhea.

- Polymenorrhea is frequent menstruation (< 21 day cycle)
- Hypermenorrhea or menorrhagia is abnormally heavy and prolonged menstruations at regular intervals with more than 80 ml of blood loss per cycle or prolonged bleeding, more than 8 days.
- Oligomenorrhea is an increased time between menses (35-90 days between cycles).
- Metrorrhagia is bleeding between periods.
- Menometrorrhagia is excessive and irregular bleeding.

(69) (A) Complete hydatiform mole.

- US is primarily used to rule out an intrauterine pregnancy.
- The classic US finding of a complete mole is the snowstorm or granular appearance, central heterogenous mass with numerous anechoic (cystic) spaces, low resistance arterial and venous flow and absence of embryo or fetus.

When US finding and hCG levels are suspicious for hydatidiform mole, the diagnosis should be confirmed by histology.

(70) (B) Progesterone.

- Most common cause of postmenopausal bleeding is atrophic vaginitis, which is treated by estrogen, but it is related to sexual intercourse.
- This is a case of dysfunctional uterine bleeding, which is not related to sexual intercourse, caused by unopposed estrogen due to anovulation, so the treatment is progesterone or combined oral contraceptive pills.
- Treatment depends on what is causing the bleeding:
- Polyps may need surgery to remove them.
- Endometrial atrophy can be treated with medication alone.
- Endometrial hyperplasia may be treated with medication, such as progestin or progesterone therapy and/or surgery to remove thickened areas of the endometrium.

(71) (A) Postmenopausal women.

- Dysfunctional uterine bleeding has a negative impact on the quality of life of affected women whether young or old.
- It occurs in approximately 10-30% of reproductive-aged women, 20% in adolescence and 40% in patients over age 40-year-old.

(72) (B) Suspensory ligament.

- The suspensory ligament contains ovarian vessels and nerves.

(73) (B) Endometrial atrophy.

- The most common cause of postmenopausal bleeding is vaginal atrophy but endometrial hyperplasia must be ruled out first. Other causes include polyps, cervical cancer, hormonal replacement therapy, and endometrial cancer. Endometrial polyps, uterine tumors, ovarian cancer and estrogen-secreting tumors in other parts of the body.

(74) (D) Placenta previa increases with an increasing number of cesarean sections.

Placenta previa is an obstetric complication that occurs in the second and third trimesters of pregnancy. This condition is generally defined as the implantation of the placenta over or near the internal os of the cervix and it is one of the leading causes of vaginal bleeding in this time period.

The exact etiology of placenta previa is unknown.

The condition may be multifactorial and is postulated to be related to the following risk factors: Multiple gestations (larger surface area of the placenta), short interpregnancy interval, prior uterine surgery, uterine insult or injury previous cesarean delivery including first subsequent pregnancy following a cesarean delivery, advancing maternal age (> 35-year-old), infertility treatment, multiparity 5% in grand multiparous patients), previous or recurrent abortions, prior placenta previa (4-8%), placental abruption from preeclampsia, chronic hypertension, erythroblastosis, nonwhite ethnicity, low socioeconomic status, smoking, cocaine use, digital examination and trauma (e.g. postcoital trauma).

- A study showed that the risk of placenta previa is 0.26% with an unscarred uterus and increased almost linearly with the number of prior cesarean sections to 10% in patients with 4 or more.

(75) (B) Incomplete abortion.

- Most incomplete abortions occur in women whose pregnancies have reached 8 weeks or more from the time of conception, or 10 weeks from last menstrual period.

The fetus has grown to an inch and length and may be too large to pass through the cervix on its own.

(76) (A) Smoking.

Smoking is an important risk factor for antepartum hemorrhage.

(77) (C) Abruptio placenta.

- Causes of antepartum hemorrhage:

- 1- Abruptio placentae 30%.
- 2- Placenta previa 20%.
- 3- Uterine rupture
- 4- Vasa previa.

(78) (A) Oral contraceptive pills.

- Oral contraceptive pills, also called combined oral contraceptive pills, contain estrogen and progesterone. Combined oral contraceptive pills decrease milk volume and impair a woman's ability to breast feed exclusively.

Thus, hormonal contraceptives can be used immediately postpartum, but progestin-only contraceptives are preferable during the first 6 months because they have no apparent deleterious effect on breast feeding.

Mini pills are progesterone-only birth control pills.

Depo-provera is a progesterone-only birth control injection.

(79) (C) It could be due to high prolactin levels.

- Infertility is the failure to conceive (regardless of cause) after 1 year of unprotected intercourse.
- Female factors are more common than male factors.
- Anovulation is a common cause of infertility.

(80) (A) History of previous DVT.

- Absolute contraindications for the combined oral contraceptive pills include: active thrombophlebitis or venous thrombo-embolism disorder, acute or chronic obstructive liver disease with elevated liver enzyme levels or compromised liver function, known or suspected breast cancer, undiagnosed genital bleeding, smoking in women over 35-year-old and known or suspected pregnancy.

(81) (A) Cervical mucosa.

- Mode of oral contraceptive pills action:

- 1- The primary mechanism is inhibition of the luteinizing hormone surge, which leads to suppression of ovulation.
- 2- Thickening of the cervical mucosa decreases the water content and increases the viscosity of the cervical mucosa, resulting in ineffective sperm migration.
- 3- Slowing tubal motility and ova transport may interfere with fertilization.
- 4- Alteration of endometrium, to make it thin and inactive, hampers implantation.

(82) (C) It inhibits mid-cycle gonadotropin then ovulation.

- Oral contraceptive pills acts primarily by inhibiting the mid-cycle surge of gonadotropin secretion and there by inhibiting ovulation.
- They also alter the endometrium and cervical mucus to decrease sperm transport and implantation and decrease tubal motility.

(83) (A) Clomiphene.

- Clomiphene is the most commonly prescribed fertility drug and is indicated for the treatment of anovulation.
- Clomiphene citrate is an estrogen antagonist and works best in women with a functioning hypothalamic-pituitary-ovarian axis (e.g. women with normal estrogen levels and oligo- or anovulation such as those with polycystic ovarian syndrome).

(84) (A) Continue trying to one year.

- Infertility is the failure to conceive (regardless of cause) after 1 year of unprotected intercourse.

(85) (D) Metronidazole.

- This is a case of trichomoniasis.
- Treatment of trichomoniasis is metronidazole.
- Sexual partners must be treated (even if asymptomatic) to prevent reinfection.

(86) (A) Metronidazole.

- *Trichomonas vaginalis* is a flagellated protozoon which is predominantly sexually transmitted.
- It is able to attach to squamous epithelium and can infect the vagina and urethra.
- *Trichomonas* may be acquired perinatally in babies born to infected mothers.
- Metronidazole is the treatment of choice for trichomoniasis, either 2 gm orally as a single dose or 400 mg twice daily for 7 days.
- There is some evidence of metronidazole resistance and tinidazole may be effective in these cases.
- Topical therapy with intravaginal tinidazole can be effective, but if extravaginal infection exists this may not be eradicated and vaginal infection reoccurs.
- Male partners should be treated, especially as they are likely to be asymptomatic and more difficult to detect.

(87) (A) Gonorrheal arthritis.

- Gonococcal arthritis is caused by infection with the Gram-negative diplococcus (*Neisseria gonorrhoea*).
- Exact diagnosis depends on identification of *Neisseria gonorrhoea* by one of several methods; one of these is Gram stain, looking for Gram-negative diplococcus in polymorphonuclear leukocytes.

(88) (A) Cervix.

- The most common site of gonorrhea infection in women is the endocervix, followed by the urethra, then the rectum and then the pharynx.
- The most common site for infection in man is the urethra.

(89) (A) Vulvovaginal candidiasis.

- *Candida* infection is common in women who take antibiotics.
- Broad-spectrum antibiotics are effective against a wide range of bacteria but kill healthy bacteria in the vagina, which can lead to the overgrowth of *Candida*.
- Factors that increase the risk of developing a *Candida* infection include antibiotic use, increased estrogen levels, uncontrolled diabetes mellitus and impaired immune system.

(90) (A) Ceftriaxone.

- Ceftriaxone is the drug of choice in treating gonorrhea because of the attainment of high, sustained bactericidal levels in the blood.
- Negative considerations include possibly higher drug cost, discomfort because of injection and additional expense due to injection administration.

(91) (A) Gonorrhea.

- *Neisseria gonorrhoeae* is a Gram-negative intracellular diplococcus which infects epithelium particularly of the urogenital tract, rectum, pharynx and conjunctivae.
In women, the primary site of infection is usually the endocervical canal.
- Symptoms include an increased or altered vaginal discharge, pelvic pain due to ascending infection, dysuria and intermenstrual bleeding.
- Complications include Bartholin's abscesses and in rare cases, perihepatitis (Fitzhugh-Curtis syndrome) can develop.

- On a global basis. *Neisseria gonorrhoeae* is one of the most common causes of female infertility.
- Rectal infection, due to local spread, occurs in women and is usually asymptomatic, as is pharyngeal infection.
- Conjunctival infection is seen in neonates born to infected mothers and is one cause of ophthalmia neonatorum.
- Treatment is indicated in those patients who have a positive culture for *Neisseria gonorrhoeae*.
- Single-dose oral therapy with cefixime (400 mg), ceftriaxone IM (250 mg) or spectinomycin 2 gm IM successfully treats uncomplicated anogenital infection.
- Longer courses of antibiotics are required for complicated infections.
- There should be at least one follow-up assessment and culture tests should be repeated at least 72 hours after treatment is complete.
- All sexual contacts should be notified and then examined and treated as necessary.

(92) (A) Colpotomy.

- Unresolved abscesses may be drained percutaneously via posterior colpotomy (under CT or US guidance), laparoscopically, or through laparotomy.
- In this case the management will be by colpotomy.
- Posterior colpotomy is preserved for abscesses in the cul-de-sac.
- The 3 requirements for colpotomy drainage are as follows:
 - 1- Abscess must be in the midline.
 - 2- Abscess should be adherent to the peritoneum of the cul-de-sac and dissect into the rectovaginal septum to ensure extraperitoneal drainage of pus.
 - 3- Abscess should be cystic or fluctuant for adequate drainage.
- Cases that do not meet the above criteria can be managed by percutaneous drainage or laparotomy.
- Colpotomy also known as a vaginotomy is a procedure by which an incision is made in the vagina.

(93) (B) After 6 months, if negative repeat it annually.

- Cervical Pap smear is used for screening for cervical cancer
- Women with HIV are advised to have screening more frequently.
- HIV-positive women should have a cervical smear when they are first diagnosed with HIV if negative repeat after 6 months and if negative repeat it every year.

(94) (B) Greenish frothy discharge.

- *Trichomonas vaginalis* usually presents with frothy yellow-green vaginal discharge, strong-unpleasant odor and pain during urination and sexual intercourse.

(95) (D) Didoxacillin.

- Empirical antibiotic therapy for mastitis for a lactating mother should include activity against *Staphylococcus aureus*.
- For non-severe infections in the absence of risk factors for methicillin-resistant *Staphylococcus aureus*, outpatient therapy may be initiated with didoxacillin or cephalexin.
- For beta lactam hypersensitivity, clindamycin may be used.
- For non-severe infections with risk for methicillin-resistant *Staphylococcus aureus*, outpatient therapy with trimethoprim-sulfamethoxazole or clindamycin may be initiated, Linezolid is also acceptable.
- For severe infections (e.g. hemodynamic instability or progressive erythema), inpatient therapy

(96) (A) Doxycycline or didoxacillin.

- For simple mastitis without an abscess, oral antibiotics are prescribed. Cephalexin and didoxacillin are 2 of the most common antibiotics chosen.
- Oral antibiotics for mastitis:
- Amoxicillin/davulanate (augmentin) 875 mg twice daily.
- Cephalexin 500 mg 4 times daily.
- Ciprofloxacin 500 mg 2 times daily.
- Clindamycin 300 mg 4 times daily.
- Didoxacillin 500 mg 4 times daily.
- Trimethoprim/sulfamethoxazole, 160 mg/800 mg twice daily, which is often effective against methicillin-resistant *Staphylococcus aureus*.
- However, avoid in women breastfeeding healthy infants 2-month-old or younger and compromised infants.

(97) (B) Fluconazole orally as a single dose.

- This is case of vulvovaginal candidiasis
 - Vulvovaginal candidiasis can be managed with either topical antifungal agents or a single dose of oral fluconazole.
- > A single dose of oral fluconazole (150 mg) in acute episodes of vulvovaginal candidiasis has been shown to yield clinical and microbiological efficacy as good as or better than topical antifungal agents.

(98) (A) Bacterial vaginosis.

- Vaginal odor is the most common and often initial symptom of bacterial vaginosis.
- Odor may be recognized only after sexual intercourse.
- The alkalinity of semen may cause a release of volatile amines from the vaginal discharge and cause a fishy odor.
- The amines are products of anaerobic bacterial metabolism.
- Increased vaginal discharge is typically mild to moderate.
- Vulvar irritation is less common.
- Dysuria or dyspareunia occur rarely.
- The whiff test may be positive in up to 70% of bacterial vaginosis patients. This test is performed by placing a drop of 10% KOH on the speculum after the vaginal examination or mixing vaginal fluid with a drop of KOH on a microscope slide. The potassium hydroxide, by virtue of its alkaline properties, causes the release of volatile amines from the vaginal fluid. The amines are products of anaerobic bacterial metabolism.
- A pH > 4.5 indicates infection

Clinical Elements		Bacterial vaginosis	Trichomonas vaginalis	Vaginal candidiasis
Symptoms	Vaginal odor	+	+/-	-
	Vaginal discharge	Thin, gray, homogenous +/-	Green-yellow	White, curdlike +
	Vulvar irritation		+	
	Dyspareunia	-	+	-
	Vulvar erythema	-	+/-	+/-
Signs	Bubbles in vaginal fluid	+	+/-	-
	Strawberry cervix	-	+/-	-
Microscopy	Saline wet mount			
	Clue cells	+	-	-
	Motile protozoa	-	+	-
	KOH test			
	Pseudohyphae	-	-	+
	Whiff test	+	+/-	-
	PH	>4.5	>4.5	<4.5

(99) (C) Neonatal hypoglycemia.

- Insulin will cross placenta which lead to neonatal hypoglycemia.
- Infants bom to diabetic mothers are at increasing risk of morbidity and mortality related to the following: respiratory distress, growth abnormalities (large for gestational age, small for gestational age), hyperviscosity secondary to polycythemia, hypoglycemia, congenital malformations, hypocalcemia, hypomagnesemia and iron abnormalities.

(100) (A) Before conception.

- The congenital anomaly of diabetes mellitus mother occurs in first trimester so you should to control it before conception.
- In women with overt diabetes and suboptimal glycemic control before conception, the likelihood of a structural anomaly is increased.
- Patients who have received more aggressive preconception and first trimester management, report decreased anomaly rates.
- It is notable that no increase in birth defects occurs among the offspring of fathers who have diabetes or the offspring of women who develop gestational diabetes after the first trimester. This suggests that periconceptional glycemic control is the main determinant of abnormal fetal development in diabetic women.

(101) (B) Glucose screening is best done at 24-28 weeks of gestation age.

- Prevalence of diabetes mellitus in pregnancy is 2-3%; approximately 90% are cases of gestational diabetes.
- There are several tests intended to identify gestational diabetes in pregnant women.
- The first, called the glucose challenge screening, is a preliminary screening test performed between 24-28 weeks.

(102) (D) Insulin.

- Treatment for gestational diabetes always includes special meal plans and scheduled physical activity. It may also include daily blood glucose testing and insulin injections.

(103) (B) Diabetes mellitus type 2.

- If a woman develops gestational diabetes, there is a very good chance that diabetes will go away immediately after the delivery.

This is especially true if diabetes was controlled with only a meal plan and exercise during pregnancy, the mother should continue to check blood glucose levels for at least several days to make sure her diabetes is actually gone.

Women with a history of gestational diabetes frequently develop diabetes mellitus type 2 later.

(104) (A) Magnesium sulfate.

Because there are no signs that accurately predict seizures, prophylaxis is most effective for all women with preeclampsia.

Magnesium sulfate is superior to other antiepileptic medications for preventing eclampsia-related seizures and seizure-related morbidity and mortality.

(105) (A) Methyldopa.

Methyldopa is most used frequently and has been studied the most. There is no evidence of fetal or maternal adverse events.

Propranolol (a non-selective beta-blocker) is associated with a possible increase in growth restriction, fetal growth restriction. Labetalol (a mixed alpha-1 and beta-blocker) has limited data, but it rapidly reduces blood pressure. Nifedipine (a calcium channel blocker) is contraindicated in pregnancy because of its effects on fetal renal function.

(106) (A) Repeat measuring of blood pressure.

Gestational hypertension is usually defined as having a blood pressure higher than 140/90 mmHg without the presence of protein in the urine and diagnosed after 20 weeks of gestation measured on separate occasions more than 6 hours apart.

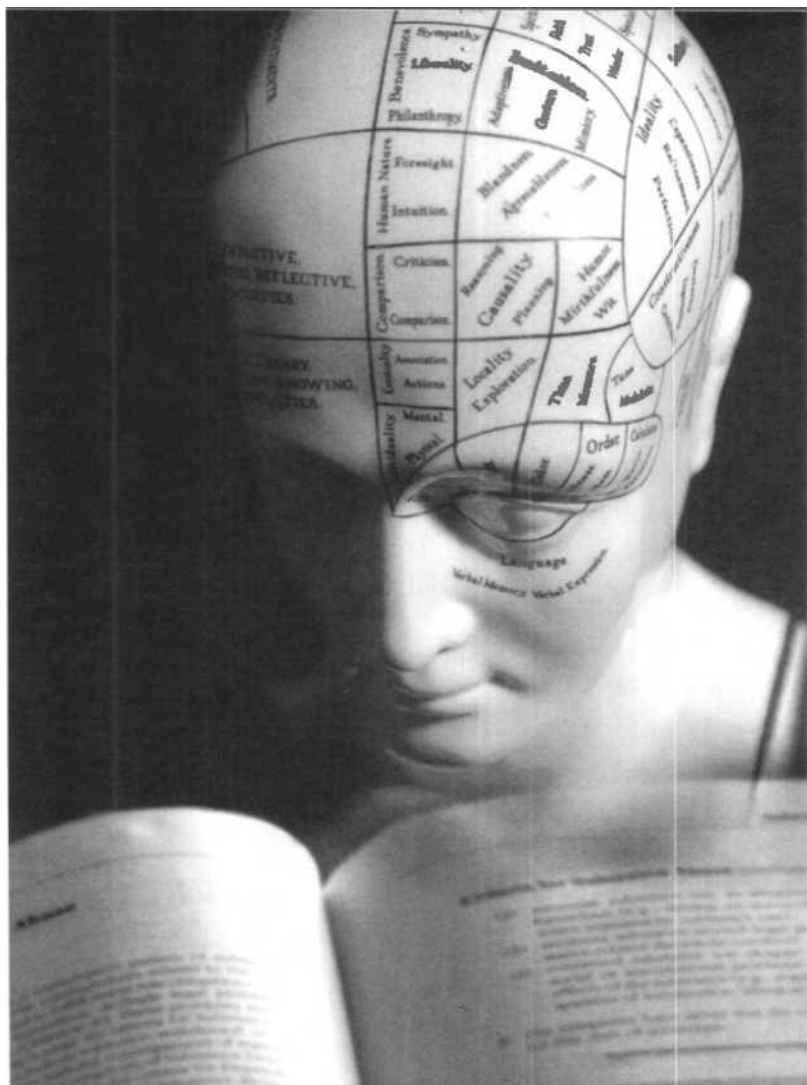
In gestational hypertension the blood pressure will return to normal before 12 weeks postpartum.

(107) (C) Chronic hypertension.

Chronic hypertension is persistent blood pressure greater than 140/90 mmHg before 20 weeks of gestation.

Chronic hypertension, initially diagnosed any time during pregnancy, is also any elevated blood pressure that persists for more than 12 weeks postpartum.

PSYCHIATRY



(1) A man walking along the street and saying bad words to stranger and he is unaware of his surroundings. What is the description of this behavior?

- (A) Flight of ideas.**
- (B) Perseveration.**
- (C) Insertion of ideas.**
- (D) Loosening of association.**

(2) A 46-year-old male presented with complaining of early ejaculation and inability to sustain erection. He believes his 26 years of marriage is alright, his wife is healthy but unorganized and obese. On examination and investigations confirms that there is no organic cause, he looks thin and sad. What is the treatment?

- (A) Selective serotonin re-uptake inhibitors.**
- (B) Sublingual nitrate 6 hours before sexual interaction.**
- (C) Testosterone injection.**
- (D) Pindolol.**

(3) A 25-year-old teacher presented with sweating, tachycardia and tightness with complaining of panic, after he made a mistake in the classroom. What is the diagnosis?

- (A) Acrophobia.**
- (B) Agoraphobia.**
- (C) Social Phobia.**
- (D) Aviophobia.**

(4) A patient told doctor that the refrigerator told him that all food inside is poisoning. What is the description of this behavior?

- (A) Auditory hallucination.**
- (B) Delusion.**
- (C) Illusion.**
- (D) Compulsion.**

(5) A young girl who became very stressed out during exams and she pull her hair till a patch of alopecia appears. What is the best treatment for her?

- (A) Selective serotonin re-uptake inhibitors.**
- (B) Behavior change therapy with emotional support.**
- (C) Tricyclic antidepressants.**
- (D) Olanzapine.**

(6) Which one of the following is true about antipsychotics?

- (A) Predominantly metabolized in the liver.**
- (B) Carbamazepine as a single dose is better than divided doses.**
- (C) Do not associated with prolonged QT interval in ECG.**
- (D) Olanzapine is one of the first generation antipsychotics.**

- (7) A female patient presented with thirst and polyuria. She gave a history of being diagnosed as bipolar and she is now on lithium. Her laboratory tests indicate that creatine level and BUN tests are normal. What is the diagnosis?
- (A) Nephrogenic diabetes insipidus.
 - (B) Central diabetes insipidus.
 - (C) Dipsogenic diabetes insipidus.
 - (D) Gestational diabetes insipidus.
- (8) Which of the following feature of schizophrenia suggest good prognosis?
- (A) Family history of schizophrenia.
 - (B) No precipitating factors.
 - (C) Presence of affecting symptoms.
 - (D) Early onset.
- (9) Which of the following is a good prognosis for schizophrenia?
- (A) Young age at onset.
 - (B) Late onset.
 - (C) Many relapses.
 - (D) Family history of schizophrenia.
- (10) What is the best treatment for binge eating disorder?
- (A) Cognitive behavioral therapy.
 - (B) Problem solving therapy.
 - (C) Interpersonal therapy.
 - (D) Pharmacological (drug) therapy.
- (11) A man is thinking that there are aliens in his yard, although he knows that aliens do not exist, he is still having these thoughts. When he is out in the yard, he is afraid of dying due to alien attack. What is the diagnosis?
- (A) Obsession.
 - (B) Delusion.
 - (C) Hallucination.
 - (D) Illusion.
- (12) What is the most common side effect of antipsychotics?
- (A) Alopecia.
 - (B) Weight gain.
 - (C) Hypotension.
 - (D) Weight loss.

(13) A 26-year-old male patient with known case of depression became unconscious with toxicity of unknown substance. He was taking citalopram. By investigation: metabolic acidosis and anion gap of 18 were found. What is the cause?

- (A) Citalopram toxicity.**
- (B) Aspirin toxicity.**
- (C) Acetaminophen toxicity.**
- (D) Diclofenac toxicity.**

(14) A male patient presented with acute onset of disorientation, change in the level of consciousness, decreased mental focus and tremor and reports that he was well before. What is the diagnosis?

- (A) Parkinson dementia.**
- (B) Schizophrenia.**
- (C) Delirium.**
- (D) Delusional disorder.**

(15) Why selective serotonin re-uptake inhibitors are the first line of treatment for major depression?

- (A) Less expensive.**
- (B) Most tolerable and effective.**
- (C) To differentiate between psychosis and depression.**
- (D) Selective serotonin re-uptake inhibitors do not increase uterine bleeding.**

(16) What is the most common cause of sleeping in daytime?

- (A) Narcolepsy.**
- (B) Mood disturbance.**
- (C) General anxiety disorder.**
- (D) Sleep apnea.**

(17) A patient has known case of chronic depression. Which of the following is true about treatment with paroxetine?

- (A) May take up to 4 weeks before symptoms improve.**
- (B) Initial dose: 20 mg orally once a day with or without food, usually in the morning and not stopping the treatment suddenly.**
- (C) Paroxetine may also be contraindicated in many adult men due to sexual and reproductive side effects.**
- (D) All of the above.**

(18) A patient whose symptoms are exaggerated when he is around other people. What is the diagnosis?

- (A) Somatization.**
- (B) Malingering.**
- (C) Factitious disorder.**
- (D) Conversion disorder.**

(19) Which one of the following is secondary presenting complaint in patient with panic attack disorder?

- (A) Dizziness.**
- (B) Epigastric pain.**
- (C) Tachycardia.**

(20) Main difference between dementia and delirium?

- (A) Memory impairment.
- (B) Level of consciousness.
- (C) Aphasia.
- (D) Apraxia.

(21) What are the differences between dementia and delirium?

- (A) Delirium is acute reversible global cognitive impairment, but dementia is chronic irreversible global impairment of cognitive functions.
- (B) Delirium is transitory, has quick onset and its symptoms will remit with proper treatment; dementia is a long term disorder, usually slow progressing and characterized by a gradual decline from baseline.
- (C) There is a fluctuation in the level of consciousness in delirium, but in case of dementia the level of consciousness is generally steady.
- (D) All of the above.

(22) What is the drug of choice in general anxiety disorder?

- (A) Benzodiazepines.
- (B) Buspirone.
- (C) Venlafaxine.
- (D) Selective serotonin re-uptake inhibitors.

(23) A partner lost his wife before 6 months ago and presented with loss of appetite, low mood and sense of guilt because he did not take her to the doctor before her sudden death and thinking that he is the responsible for her death. What is the diagnosis?

- (A) Bereavement.
- (B) Major depression.
- (C) Adjustment disorder with depression.
- (D) Mourning.

(24) Which of the following is an early warning sign for hopelessness?

- (A) Choosing suicide.
- (B) Bipolar disorders.
- (C) Depression.
- (D) Dysthymia.

(25) What is the half-life of fluoxetine after acute administration?

- (A) 2 hours.
- (B) 18 hours.
- (C) 1-3 days.
- (D) 7-9days.

(26) A child becomes inactive and depressed after changing his school due to moving to another place. What is the diagnosis?

- (A) Adjustment disorder.
- (B) Anxiety disorder.
- (C) Major depression disorder.
- (D) Conduct disorder.

- (27) Which of the following drugs is best to be given as maintenance for bipolar disorder?
- (A) Sodium valproate.
 - (B) Lithium.
 - (C) Olanzapine.
 - (D) None of the above.
- (28) A patient was diagnosed with severe depression and now he shows some improvement with antidepressant therapy. How that may affect his risk of suicide?
- (A) No risk.
 - (B) Become greater.
 - (C) Become lower.
 - (D) No change.
- (29) A 12-year-old boy is mocked at school because he is obese; he desires to die by taking pills. What is the best line of treatment?
- (A) Cognitive behavioral therapy.
 - (B) Pharmacological (drug) therapy.
 - (C) Advice healthy food.
 - (D) None of the above.
- (30) An elderly patient was diagnosed with depression. What is time the antidepressants drugs need to work properly?
- (A) 2 weeks.
 - (B) 3-4weeks.
 - (C) 2 months.
 - (D) None of the above.
- (31) What is the best line of treatment for major depressive disorder?
- (A) Escitalopram.
 - (B) Selegiline.
 - (C) Trazodone.
 - (D) Bupropion.
- (32) What is the best initial treatment for depression?
- (A) Selective serotonin re-uptake inhibitors.
 - (B) Bupropion.
 - (C) Venlafaxine.
 - (D) Scelium tortuosum.
- (33) Which of the following is secondary to depression?
- (A) Dizziness.
 - (B) Anxiety.
 - (C) Abdominal pain.
 - (D) Tachycardia.

- (34) What is the most common line of treatment for alcohol withdrawal syndrome?
- (A) Benzodiazepines.
 - (B) Antipsychotics.
 - (C) Clomethiazole.
 - (D) Trazodone.
- (35) Which of the following is true regarding depression?
- (A) Selective serotonin re-uptake inhibitors are leading to sexual dysfunction in 17-41% of patients.
 - (B) Venlafaxine can be used safely in severe hypertension.
 - (C) Cardiovascular side effects are very common with selective serotonin re-uptake inhibitors use.
 - (D) Tricyclic antidepressants have fewer side effects than selective serotonin re-uptake inhibitors.
- (36) A 45-year-old male patient presented with increased alcohol intake during last few weeks, increased activity and phone calls and getting not more than 2 hours sleep at a time. What is the diagnosis?
- (A) Alcohol abuse.
 - (B) Mania.
 - (C) Depression.
 - (D) Attention deficit hyperactivity disorder.
- (37) A 50-year-old female patient with known case of anxiety became stressed and anxious with tachycardia and dyspnea during an interview about one month ago. She had to cancel it and always try to avoid that room where the interview in it. What is the diagnosis?
- (A) Generalized anxiety disorder.
 - (B) Specific anxiety disorder.
 - (C) Panic disorder.
 - (D) Social phobia.
- (38) What is the mechanism of action of the tricyclic antidepressants?
- (A) Inhibiting reuptake of norepinephrine and serotonin leading to increased concentration of these neurotransmitters.
 - (B) Increase reuptake of serotonin.
 - (C) Block or delay the re-absorption of serotonin.
 - (D) Unknown.
- (39) A patient with refractory depression and psychotic features took drug that causes neutropenia. Which drug did he use?
- (A) Selective serotonin re-uptake inhibitors.
 - (B) Clozapine.
 - (C) Bupropion.
 - (D) Venlafaxine.

(40) A female patient was diagnosed with anxiety. What is the drug of choice for rapid relief of her symptoms?

- (A) Benzodiazepines.**
- (B) Barbiturates.**
- (C) Selective serotonin re-uptake inhibitors.**
- (D) Bupropion.**

(41) A female patient was diagnosed with major depression and after being treated she presented with complaints of insomnia and irritability. Which line of treatment she is taking?

- (A) Selective serotonin re-uptake inhibitors.**
- (B) Tricyclic antidepressants.**
- (C) Monoamine oxidase inhibitors.**
- (D) Serotonin norepinephrine reuptake inhibitors.**

(42) A male patient was diagnosed with depression and medications were prescribed for him. Next day, he told that he has planned a suicide plan. What is the action now?

- (A) Counseling.**
- (B) Admit to hospital.**
- (C) Call to police.**
- (D) Take it as a joke.**

(43) What is delusion?

- (A) Presence of a fluctuating level of consciousness or impaired cognitive abilities.**
- (B) False fixed beliefs not in alignment with the culture or surroundings.**
- (C) State of abnormally elevated or irritable mood, arousal and/or energy levels.**
- (D) An error in perception.**

(44) What is the peak of withdrawal symptoms of tobacco?

- (A) 2-4 days.**
- (B) 5-7 days.**
- (C) 14 days.**
- (D) 21 days.**

(45) Which of the following medication can be used for the treatment of moderate to severe depression?

- (A) Amitriptyline.**
- (B) Droperidol.**
- (C) Haloperidol.**
- (D) Chlorpromazine.**

(46) Which one of the following might be a risk for committing suicide?

- (A) A 20-year-old college boy who had big conflict with his girlfriend.**
- (B) A 60-year-old woman who is taking antidepressant and newly diagnosed to have osteoporosis.**
- (C) Old man retired from community newly diagnosed with herpes zoster and start taking medication.**
- (D) None of the above.**

(47) Which of the following is the most common side effect of bupropion?

- (A) Weight loss.**
- (B) Seizure.**
- (C) Xerostomia.**
- (D) Headache.**

(48) Which of the following is correct about chronic fatigue syndrome?

- (A) Antidepressants treatment can help in reducing the symptoms.**
- (B) Can be relieved by rest.**
- (C) There is a cure for chronic fatigue syndrome.**
- (D) The exact causes of chronic fatigue syndrome are known.**

(49) A postpartum woman presented with hallucination, delusion, disorganized thinking and speech and social and emotional difficulty experienced during last 6 months. She has also experienced her child's death 3 months ago. All of the following could be the possible diagnosis except

- (A) Schizophrenia.**
- (B) Schizophreniform disorder.**
- (C) Brief psychotic disorder.**
- (D) Schizoaffective disorder.**

(50) A patient presented with elevated mood state characterized by inappropriate elation, increased irritability, severe insomnia, increased speed and volume of speech, disconnected and racing thoughts, increased sexual desire, markedly increased energy and activity level, poor judgment and inappropriate social behavior. Which of the following is associated this condition?

- (A) Hallucination.**
- (B) Delusion.**
- (C) Grandiosity.**
- (D) Delirium.**

(51) A patient presented with history of diarrhea, abdominal pain, agitation, headache, dizziness, weakness, pulsatile thyroid, unsteady gait. On examination; everything was normal. What is the diagnosis?

- (A) Hypochondriasis.**
- (B) Somatization disorder.**
- (C) Thyroid cancer.**
- (D) Anxiety.**

(52) An elderly psychiatric patient presented with hallucination, aggressive behavior, loss of memory, living without care and urinate on himself. What is next step to do for him?

- (A) Give antipsychotic.**
- (B) Admit him at a care center for elderly.**
- (C) Give mood stabilizers.**
- (D) Give methylphenidate.**

(53) What is the antidepressant that is associated with hypertensive crisis?

- (A) Selective serotonin re-uptake inhibitors.**
- (B) Tricyclic antidepressants.**
- (C) Monoamine oxidase inhibitors.**
- (D) Serotonin norepinephrine reuptake inhibitors.**

(54) What is the alternative therapy for severe depression which no longer be treated with antidepressant medications?

- (A) Selective serotonin re-uptake inhibitors.**
- (B) Tricyclic antidepressants.**
- (C) Electroconvulsive therapy.**
- (D) Serotonin norepinephrine reuptake inhibitors.**

(55) What is the mechanism of drugs used in treatment of obsessive compulsive disorder?

- (A) Increase availability of serotonin.**
- (B) Decrease production of serotonin.**
- (C) Increase production of serotonin.**
- (D) Serotonin depletion.**

(56) A 30-year-old male presented with the following behavior: he is covering the television because he believes that the government is spying on him and God talks to him through the lamp and has special power. What is the diagnosis?

- (A) Schizophrenia.**
- (B) Bipolar affective disorder.**
- (C) Mental disorders secondary to general medical conditions.**
- (D) Shared psychotic disorder.**

(57) A patient who is taking anti-psychiatric medication, presented with tachycardia, dry mouth, hyper-reflexia, dilated pupils and strabismus due to drug toxicity. What is the medication he is taking?

- (A) Tricyclic antidepressants.**
- (B) Selective serotonin re-uptake inhibitors.**
- (C) Ephedrine.**
- (D) Aspirin.**

(58) A newly married wife noticed her husband check the closed door many times; also when he takes a shower for long time, while repeating his prayer many times. What is the diagnosis?

- (A) Obsessive compulsive disorder.**
- (B) Schizophrenia.**
- (C) Attention deficit hyperactivity disorder.**
- (D) Major depressive disorder.**

- (59) An elderly retired man presented with insomnia, with no symptoms related to anxiety or depression. What is the best drug for him?
- (A) Zolpidem.
 - (B) Selective serotonin re-uptake inhibitors.
 - (C) Tricyclic antidepressants.
 - (D) Diazepam.
- (60) Which of the following drugs is not available as emergency tranquilizer in psychiatric clinics?
- (A) Haloperidol.
 - (B) Phenobarbital.
 - (C) Lorazepam.
 - (D) Diazepam.
- (61) A female patient was in the lecture room, suddenly had an attack of anxiety with palpitation and shortness of breath. After this episode, she fears going back to the same place to avoid another attack. What is the diagnosis?
- (A) Panic attack.
 - (B) Anxiety attack.
 - (C) Generalized anxiety disorder.
 - (D) Cardiac dysrhythmias.
- (62) Which of the following disease in children can be treated by Clozapine?
- (A) Schizophrenia.
 - (B) Depression.
 - (C) Enuresis.
 - (D) None of the above.
- (63) A child started to talk to himself and walk in the street naked, after his father's death. He said that his father asked him to do that. A 3 days after this incidence, he seemed completely normal and does not remember much about the past events. What is the diagnosis?
- (A) Schizophrenia.
 - (B) Schizoaffective.
 - (C) Schizophreniform.
 - (D) Brief psychotic disorder.
- (64) What is the best drug used for treating schizophrenia, mania and schizophreniform disorders?
- (A) Risperidone.
 - (B) Amitriptyline.
 - (C) Olanzapine.
 - (D) Paroxetine.

(65) Which one of the following is correct regarding obsessive neurosis?

- (A) Treatment is easy.**
- (B) Clomipramine is not a line of treatment.**
- (C) Mostly associated with severe depression.**
- (D) Can be cured spontaneously.**

(66) A patient presented with fear to go to park, zoo and sport stadium. What is the diagnosis?

- (A) Agoraphobia.**
- (B) Schizophrenia.**
- (C) Social phobia.**
- (D) Panic disorders.**

(67) A patient presented with echolalia, echopraxia, poor hygiene, insomnia and weird postures. What is the treatment?

- (A) Paroxetine.**
- (B) Lithium.**
- (C) Risperidone.**
- (D) Benzodiazepines.**

(68) Which one of the following is correct regarding postpartum psychosis?

- (A) Recurrences are common in subsequent pregnancies.**
- (B) It often progresses to frank schizophrenia.**
- (C) It has good prognosis.**
- (D) It has insidious onset.**

(69) An 80-year-old man living in a nursing home for the past 3 months. His wife died 6 months ago and he has been diagnosed with a coronary artery disease within the past month. He is now forgetful especially of short term memory and has decreased eye contact with loss of interest. What is the diagnosis?

- (A) Alzheimer's disease.**
- (B) Depression.**
- (C) Hypothyroidism.**
- (D) Hyperthyroidism.**

(70) A female patient is on her third week postpartum and complains that she frequently visualizes snakes crawling to her baby's bed; although she knows that it is impossible but she cannot remove the idea from her mind and said that she wakes up around 50 times at night to check on her baby.

This problem prevents her from getting good sleep and it started to affect her marriage. What is the diagnosis?

- (A) Postpartum obsessive compulsive disorder.**
- (B) Hallucination.**
- (C) Postpartum psychosis.**
- (D) Delusion.**

- (71) An elderly man presented with the feeling that he is forced to count the things and he does not want to perform that task. What is the diagnosis?
- (A) Obsessive compulsive disorder.
 - (B) Depression.
 - (C) Delusion.
 - (D) Illusion.
- (72) A 45-year-old female patient presented with irritability, excessive worry for 8 months with low appetite and decreased concentration. What is the diagnosis?
- (A) Generalized anxiety disorder.
 - (B) Specific phobia.
 - (C) Social anxiety disorder.
 - (D) Panic disorder.
- (73) A 61-year-old man diagnosed with irritable bowel syndrome, after 6 months he presented with low appetite, low weight, trouble sleeping and less concentration. What is the diagnosis?
- (A) Late life depression.
 - (B) Generalized anxiety disorder.
 - (C) Bipolar disorder.
 - (D) Dysthymia.
- (74) A female patient told that she hears someone is talking to her, when in fact no one is talking. What is the description of this behavior?
- (A) Auditory hallucination.
 - (B) Delusion.
 - (C) Schizophrenia.
 - (D) Illusion.
- (75) What is the first line treatment for moderate to severe depressive disorder in children?
- (A) Electroconvulsive therapy.
 - (B) Selective serotonin re-uptake inhibitors.
 - (C) Tricyclic antidepressants.
 - (D) Bupropion.
- (76) A male patient with known case of Alzheimer's disease with psychotic manifestations. What is the treatment?
- (A) Haloperidol.
 - (B) Paroxetine.
 - (C) Fluoxetine.
 - (D) Fluvoxamine.
- (77) A patient presented with complaints of fear, shortness of breath and sweating when he is within an automobile. What is the diagnosis?
- (A) Specific phobia.
 - (B) Panic disorder.
 - (C) Generalized anxiety disorder.
 - (D) Post traumatic stress disorder.

(78) What is the treatment of hallucination and delusion?

- (A) Antipsychotics.**
- (B) Cognitive behavioral therapy.**
- (C) Tricyclic antidepressants.**
- (D) None of the above.**

(79) A patient comes to ER daily with different complaints, but nothing can be clinically diagnosed.

What is the diagnosis?

- (A) Somatization.**
- (B) Malingering.**
- (C) Depression.**
- (D) Mania.**

(80) A male patient presented with complains of loss of association and circumstantiality, neologism and flight of idea. What is the defect?

- (A) Form.**
- (B) Content.**
- (C) Quality.**
- (D) None of the above.**

(81) A 38-year-old male complaining of fear from going outside and fear from seeing the front door. He also does not sit in a room which has a front door. What is the most likely diagnosis?

- (A) Depression.**
- (B) Agoraphobia.**
- (C) Malingering.**
- (D) Anti-social personality.**

(82) What is the mechanism of the drug that is prescribed for patients with depression?

- (A) Increased availability of serotonin.**
- (B) Decreased production of serotonin.**
- (C) Increased production of serotonin.**
- (D) Serotonin depletion.**

(83) A patient presented with complaining of hearing voices, later he started to complain about the thought in his mind which cannot be taken out. What is the diagnosis?

- (A) Schizophrenia.**
- (B) Depression.**
- (C) Mania.**
- (D) Agoraphobia.**

(84) Electroconvulsive therapy is a good management for:

- (A) Severe agoraphobia.**
- (B) Severe or major depression.**
- (C) Mania.**
- (D) General anxiety disorder.**

- (85) Which of the following is correct about management of major depression disorder?
- (A) Initially start with monotherapy even in severe depression.
 - (B) The treatment should be changed if no response is seen within 2 weeks.
 - (C) Psychotherapy, medication and electroconvulsive therapy.
 - (D) No need for hospital admission in severe depression.
- (86) A 40-year-old man becomes sweaty with palpitation before giving a speech in public; however, he does very well at his job. What is the diagnosis?
- (A) Generalizes anxiety disorder.
 - (B) Performance anxiety.
 - (C) Agoraphobia.
 - (D) Depression.
- (87) Which of the following antipsychotic medication has rapid onset of action?
- (A) Sublingual.
 - (B) Oral.
 - (C) IM.
 - (D) IV.
- (88) A patient thinks that he has a brain tumor, but actually it is not true. What is the diagnosis?
- (A) Somatization disorder.
 - (B) Hypochondriasis.
 - (C) Generalized anxiety disorder.
 - (D) Depression.
- (89) A 14-year-old girl presented with palpitation, tachypnea and paraesthesia after failing in her school examination. What is the diagnosis?
- (A) Hyperventilation syndrome.
 - (B) Depression.
 - (C) Acute respiratory distress syndrome.
 - (D) Panic disorder.
- (90) A 29-year-old female teacher has recurrent attacks of intense fear before the beginning of her classes in the secondary school. She thinks that, it is only a matter of time before she will make some mistakes. What is the diagnosis?
- (A) Specific phobia.
 - (B) Social phobia.
 - (C) Mixed phobia.
 - (D) Panic attacks with agoraphobia.
- (91) A parent is complaining about his 6-year-old boy who eats paper and clay. What is the management?
- (A) Behavioral therapy.
 - (B) Fluoxetine.
 - (C) Bupropion.
 - (D) Mirtazapine.

- (92) The antidepressant used for secondary depression and cause sexual dysfunction is:
- (A) Sertraline.
 - (B) Imipramine.
 - (C) Levofloxine.
 - (D) Bupropion.
- (93) Before giving lithium to a patient with bipolar disorder, you will do all of the following except:
- (A) Thyroid function test.
 - (B) Liver function test.
 - (C) Renal function test.
 - (D) Pregnancy test.
- (94) A man has excessive worry getting ill from the germs on his hand. What is the diagnosis?
- (A) Specific phobia.
 - (B) Agoraphobia.
 - (C) Obsessive compulsive disorder.
 - (D) General anxiety disorder.
- (95) A 27-year-old female patient having mood changes during and after menses. This bad mood is affecting her personality and the same symptoms regain each cycle. What is the diagnosis?
- (A) Premenstrual dysphoric disorder.
 - (B) Major depression disorder.
 - (C) Postpartum blues.
 - (D) Postpartum depression.
- (96) A man changed his job and in his new job, he has to talk in front of 50 people. He feels that he cannot do this and he send his friend instead. What is the management?
- (A) Propranolol.
 - (B) Biofeedback.
 - (C) Selective serotonin re-uptake inhibitors.
 - (D) Cognitive behavior therapy.
- (97) A 44-year-old female, mother of 3 boys, presented with bouts of shortness of breath, fatigue, dizziness and chest discomfort. She is doing well at her job, but she thinks a lot about her job and children. What is the diagnosis?
- (A) Specific phobia.
 - (B) Panic attack.
 - (C) Generalized anxiety disorder.
 - (D) Social phobia.
- (98) Which personality disorder is associated with inflexibility and perfectionism?
- (A) Narcissistic personality disorder.
 - (B) Borderline personality disorder.
 - (C) Obsessive compulsive personality disorder.
 - (D) Histrionic personality disorder.

(99) Which of the following antipsychotic is associated with weight gain?

- (A) Risperidone.
- (B) Quetiapine.
- (C) Olanzapine.
- (D) Ziprasidone.

(100) Which drug is contraindicated to use in people with Migraine?

- (A) Bupropion.
- (B) Lithium.
- (C) Diazepam.
- (D) Acetaminophen.

(101) A female patient presented with being tearful and irritable after delivery, with otherwise normal mood. What is the diagnosis?

- (A) Postpartum blues.
- (B) Postpartum psychosis.
- (C) Postpartum depression.
- (D) Anxiety disorder.

(102) Which of the following is considered as an indication of electroconvulsive therapy?

- (A) Major depression with psychomotor symptoms.
- (B) Patients without suicidal thoughts.
- (C) Patient with chronic schizophrenia.
- (D) None of the above.

(103) A middle-aged patient is presented with abdominal pain and he thinks he has gastric cancer; he went to 6 gastroenterologists and did one CT scan, one barium enema and series of investigation, but all are normal. What is the diagnosis?

- (A) Hypochondriasis.
- (B) Conversion disorder.
- (C) Somatization disorder.
- (D) Malingering.

(104) A 33-year-old female patient has myocardial infarction and complication of ventricular tachycardia and from that time she started taking buspirone and now she has fatigue. On examination; BP = 120/80 mmHg and HR = 65/min. Which of the following investigation must to be done?

- (A) Thyroid function.
- (B) Liver and renal function tests.
- (C) Pregnancy test.
- (D) None of the above.

(105) A young patient diagnosed with major depressive disorder. What is the finding during communication with the patient?

- (A) Hypomania.
- (B) Late morning awake.
- (C) Loss of eye contact.
- (D) Mania.

(106) Which one of the following anti-psychotic drug causes ECG changes, leukopenia and drooling?

- (A) Risperidone.**
- (B) Clozapine.**
- (C) Amisulpride.**
- (D) Haloperidol.**

(107) Which of the following antidepressant medications cause insomnia, restlessness and anxiety?

- (A) Tricyclic antidepressants.**
- (B) Monoamine oxidase inhibitors.**
- (C) Selective serotonin re-uptake inhibitors.**
- (D) All of the above.**

(108) An elderly patient is suspected to have cognitive dysfunction, what test should be done before sending the patient home?

- (A) Do brief intelligence quotient test.**
- (B) Do Assessment for hearing loss.**
- (C) Clock drawing test.**
- (D) None of the above.**

(109) Regarding postpartum depression, what is the most appropriate intervention which can reduce the symptoms?

- (A) Include family in the therapy.**
- (B) Isolation therapy.**
- (C) Add very low doses of imipramine.**
- (D) Encourage breastfeeding.**

(110) A 87-year-old male patient brought by his daughter and she said that he is forgetting his things the room and not paying attention. What is the diagnosis?

- (A) Alzheimer's disease.**
- (B) Multi infarct dementia.**
- (C) Depression.**
- (D) Delirium.**

(111) Which of the following disease manifested with hallucinations and paranoia?

- (A) Schizophrenia.**
- (B) Depression.**
- (C) Mania.**
- (D) Phobia.**

(112) A patient presented with alcohol withdrawal manifestations such as headache, hyperactivity, agitation and dilated pupil. What is the management?

- (A) Diazepam.**
- (B) Naxtrol.**
- (C) Haloperidol.**
- (D) Clozapine.**

(113) A 73-year-old patient is complaining of progressive loss of memory (progressive dementia) with decrease in cognitive function, but no personality changes. Neurological examination was normal however, visuodeficit was found. CT scan revealed ventricular dilatations and cortical atrophy. What is the diagnosis?

- (A) Alzheimer's disease.**
- (B) Multi-infarct dementia.**
- (C) Multiple sclerosis.**
- (D) Parkinsonism dementia.**

(114) A Female patient developed sudden loss of vision in both eyes while she was walking down the street, along with numbness and tingling in her feet; there is discrepancy between the complaint and the finding. On examination reveals that reflexes and ankle jerks are preserved, however, there is decreased sensation and weakness in the lower muscles. What is the management?

- (A) Referral to ophthalmologist.**
- (B) Referral to neurologist.**
- (C) Start with anti-psychotic medication.**
- (D) Reassure her and ask her about the stressors.**

(115) What is the best drug to treat depression in children and adolescent?

- (A) Fluoxetine.**
- (B) Diazepam.**
- (C) Lithium.**
- (D) All of the above.**

(116) A male patient with known case of pancreatic cancer was treated with chemotherapy and has improved significantly. He now came to the doctor with concern about recurrence of his cancer and visited many hospitals. What is the diagnosis?

- (A) Malingering.**
- (B) Hypochondriasis.**
- (C) Factitious disorder.**
- (D) Conversion disorder.**

(117) A Patient presented with symptoms of anxiety including palpitation, agitation and worry. What is the first best line for treatment?

- (A) Selective serotonin re-uptake inhibitors.**
- (B) Tricyclic antidepressants.**
- (C) Beta-blockers.**
- (D) Monoamine oxidase inhibitors.**

(118) A patient presented with a history of low interest in life, not sleep well and not finding any joy in his life for last 2 years. What is the most likely diagnosis?

- (A) Dysthymia.**
- (B) Major depressive disorder.**
- (C) Bipolar disorder.**
- (D) None of the above.**

(119) What is the best drug used for treatment dementia?

- (A) Haloperidol.**
- (B) Galantamine.**
- (C) Memantine.**
- (D) Omega-3 fatty acids.**

(120) A 70-year-old patient presented with progressive dementia. By using brain microscopy, amyloid plaques and neurofibrillary tangles were clearly visible. What is the diagnosis?

- (A) Dementia with Lewy bodies.**
- (B) Parkinsonism.**
- (C) Alzheimer's disease.**
- (D) None of the above.**

(121) Which of the following is correct regarding antidepressants?

- (A) Start treating with a single agent even if the patient has severe depression.**
- (B) Start any one of them; they all have the same efficacy.**
- (C) Stop the medication after 2 weeks if no improvement.**
- (D) Contraindicated to use in combination with other medications.**

(122) A young male patient who has undergone nasoplasty and blepharoplasty, was presented with deformity of his jaw. On examination nothing was found abnormal. What is the diagnosis?

- (A) Body dysmorphic syndrome.**
- (B) Obsessive compulsive disorder.**
- (C) Major depressive episode.**
- (D) Dermatillomania.**

(123) An elderly patient presented with diffuse hair thinning and loss of eye lashes, the patient is admitted because he was pulling out his hair in stress. What is the diagnosis?

- (A) Trichotillomania.**
- (B) Tinea capitis.**
- (C) Monilethrix.**
- (D) Traction Alopecia.**

(124) A 65-year-old lady presented with history of insomnia and crying since her husband died 5 days ago. What is the best treatment?

- (A) Lorazepam.**
- (B) Fluoxetine.**
- (C) Chlorpromazine.**
- (D) Haloperidol.**

(125) Which of the following is true regarding battered women?

- (A) Mostly they come from poor socioeconomic area.**
- (B) Usually they marry a second violent man.**
- (C) Mostly they come to the ER complaining of the symptoms.**
- (D) Mostly they think that the family responds like this.**

(126) What is the management of somatization?

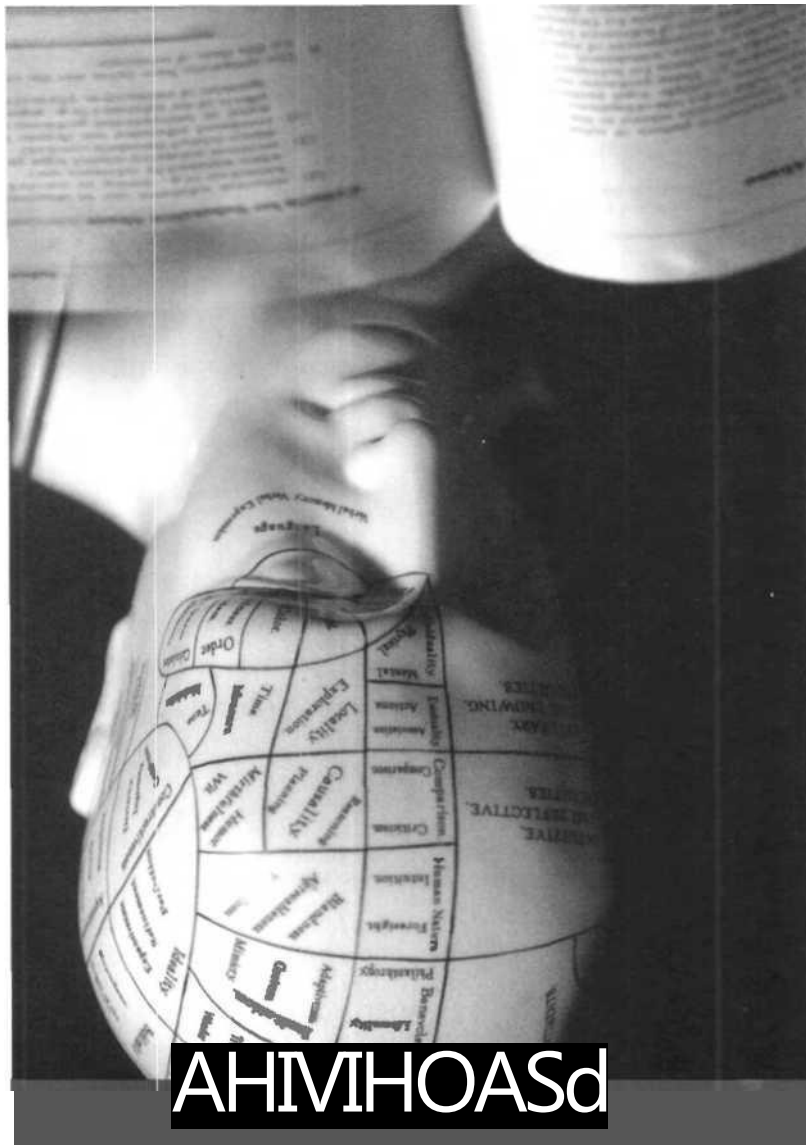
- (A) Antidepressant.**
- (B) Multiple clinic appointment.**
- (C) Referral to pain clinic.**
- (D) Reassurance.**

(127) A female patient is presented with complain of poor feeding of the baby with hallucinations, after 2 weeks of delivery. What is the diagnosis?

- (A) Obsessive compulsive disorder.**
- (B) Post-partum psychosis.**
- (C) Depression.**
- (D) Schizophrenia.**

(128) Which of the following is the side effect of amitriptyline?

- (A) Diarrhea.**
- (B) Hypertension.**
- (C) Weight loss.**
- (D) Postural hypotension.**



AHVIHOASd

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(1) (D) Loosening of association.

- Loosening of association (asyndesis) is a disorder in which separate ideas or thoughts cannot be joined into a coherent concept.

(2) (A) Selective serotonin re-uptake inhibitors.

- Prescribe one of selective serotonin re-uptake inhibitors, such as sertraline, paroxetine or fluoxetine which can be used to help delay ejaculation.
- It may take up to 10 days for these drugs to take effect.
- If timing of early ejaculation does not improve, prescribe the tricyclic antidepressant clomipramine.

(3) (C) Social Phobia.

- Social Phobia is characterized by intense fear in social situations causing considerable distress and impaired ability to function in at least some parts of daily life.

(4) (A) Auditory hallucination.

- Auditory hallucination is a form of hallucination that involves perceiving sounds without auditory stimulus.
- A common form of this disorder involves hearing one or more talking voices.

(5) (B) Behavior change therapy with emotional support.

- The diagnosis is trichotillomania.
- The most successful treatment for hair pulling disorder (trichotillomania) is behavior change therapy.
- Supportive therapies and psychoanalysis without the behavioral therapy aspect are not effective in treating this disorder.

(6) (A) Predominantly metabolized in the liver.

- The metabolism of antipsychotics occurs mostly in the liver although extrahepatic metabolism in the lung and kidneys may also take place.

(7) (A) Nephrogenic diabetes insipidus.

- Nephrogenic diabetes insipidus is characterized by a decreased ability to concentrate urine in the body because of resistance to antidiuretic hormone action in the kidney.
- It can be observed in chronic renal insufficiency, lithium toxicity, hypercalcemia, hypokalemia, glucosuria and tubulointerstitial disease.

(8) (C) Presence of affecting symptoms.

(9) (B) Late onset.

- Good prognostic factors for schizophrenia are: late onset, acute onset, obvious precipitating factors, good premorbid personality, presence of mood symptoms (especially depression), presence of positive symptoms and good support (married with stable family).
- Bad prognostic factors for schizophrenia are: young age at onset, insidious onset, no precipitating factors, poor premorbid personality, low intelligence quotient, many relapses, poor compliance, negative symptoms, poor system support, family history of schizophrenia and high emotion expressing family.

(10) (A) Cognitive behavioral therapy.

- **Bulimia nervosa is an eating disorder characterized by frequent episodes of binge eating, followed by frantic efforts to avoid gaining weight, which affects women and men of all ages.**
- **Cognitive behavioral therapy is evidence based effective treatment for bulimia nervosa.**
- **Cognitive behavioral therapy is the preferred psychotherapeutic approach for binge eating disorder (anorexia nervosa).**
- **Cognitive behavioral therapy teaches the patient how to keep track of what they eating and how they can change unhealthy are eating habits.**
- **It also teaches how to change the way they act in difficult situations.**
- **If the patient is overweight, he/she may need weight loss counseling in addition to cognitive behavioral therapy.**
- **Bulimia nervosa is treated with a combination of psychotherapy and medication.**

(11) (A) Obsession.

- **Obsessions are thoughts that recur and persist despite efforts to ignore or confront them.**

(12) (B) Weight gain.

- **40-62% of people with schizophrenia are overweight or obese.**
- **Some atypical antipsychotics (especially olanzapine and clozapine) are associated with body weight gain and have been hypothesized to be partially due to occupancy of the histamine receptor and changes in neurochemical signaling in regions of the brain that regulate appetite.**

(13) (B) Aspirin toxicity.

- **Citalopram when mixed with aspirin lead to bleeding, bruising, loss of consciousness, convulsions, swelling, vomiting, headache, dizziness and blood in urine or stools.**
- **This interaction is more likely to happen if the patient is elderly or have kidney or liver disease.**

(14) (C) Delirium.

- **Delirium has clouded consciousness or decreased level of alertness, disorientation, acuity of onset and course and presence of risk factors for it.**
- **Dementia has an insidious onset with chronic memory loss and executive function disturbance which do not fluctuate.**
- **In schizophrenia, auditory hallucinations are much more common compared to visual hallucinations, memory is grossly intact and disorientation is rare and speech is not dysarthric.**
- **Delusional disorder is chronic and often lasts lifelong; these patients generally do not show any disturbance of behavior; if disturbed behavior does occur, it is directly related to the delusional beliefs.**
- **Patients with delusional disorder mostly remain coherent, sensible and reasonable.**

(15) (B) Most tolerable and effective.

- **Selective serotonin re-uptake inhibitors are now considered the first line treatment for major depression.**
- **Previously, fluoxetine and escitalopram were the only antidepressants approved for the treatment of major depressive disorder in adolescents (12-17-year-old).**
- **Fluoxetine is also approved for children 8-year-old and older.**
- **Because they act specifically on serotonin, selective serotonin re-uptake inhibitors have fewer side effects than the previous agents.**

(16) (A) Narcolepsy.

Narcolepsy is an actual sleep disorder and chronic condition with no cure and is characterized by overwhelming feelings of sleepiness and fatigue, often during daytime, is the second cause of excessive daytime sleepiness after behavioral sleep deprivation

(17) (D) All of the above.

Paroxetine is an antidepressant drug of the selective serotonin re-uptake inhibitors type.

The onset of action is within a week; however, individual response varies greatly and full response may not be seen until 8-12 weeks after initiation of treatment.

Initial: 20 mg once daily, preferably in the morning; increase if needed by 10 mg/day increments at intervals of at least 1 week; maximum dose: 50 mg/day.

Shares the common side effects and contraindications of other selective serotonin re-uptake inhibitors, with high rates of nausea, sleepiness and sexual side effects.

(18) (B) Malingering.

Malingering is the act of intentionally feigning or exaggerating physical or psychological symptoms for personal gain, for example, patient may be exaggerating the pain for insurance claims or lawsuits, Somatization disorder is a long term (chronic) condition in which a person has physical symptoms that involve more than one part of the body, but no physical cause can be found.

Factitious disorder is a condition in which a person acts as if he or she has a physical or mental illness when he or she is not really sick.

Conversion disorder is a condition in which a person has blindness, paralysis, or other nervous system (neurologic) disorders that cannot be explained by medical evaluation.

(19) (D) Phobias.

Panic attacks and panic disorder can result in severe complications that affect daily life.

One of them can develop into specific phobias, such as fear of driving or leaving the home.

(20) (B) Level of consciousness.

(21) (D) All of the above.

Delirium is usually a sudden change in a condition.

It is triggered by a specific illness, such as a urinary tract infection, pneumonia, dehydration, illicit drug use or withdrawal from drugs or alcohol, can last for a couple of days to even a couple of months.

It may significantly and uncharacteristically impair someone's ability to speak coherently or appropriately.

People with delirium are often either overly active (hyper and restless) or under-active (lethargic and less responsive) compared to usual functioning

Dementia typically begins slowly and is gradually noticed over time.

Causes of dementia may be certain disease such as Alzheimer's, vascular dementia, Lewy body dementia, frontotemporal dementia or a related disorder.

It is generally a chronic, progressive disease that is incurable.

People with dementia may have difficulty finding the right words and the ability to express themselves usually deteriorates as the disease progresses

It usually does not affect a person's activity level until at the later stages.

(22) (A) Benzodiazepines.

- Benzodiazepines can be prescribed on an as needed basis and are rapidly acting.
- Buspirone takes 2-3 weeks to become fully effective.
- Venlafaxine is effective in treating the insomnia, poor concentration, restlessness, irritability and excessive muscle tension associated with generalized anxiety disorder.
- Selective serotonin re-uptake inhibitors may be effective, especially for patients with comorbid depression.

(23) (A) Bereavement.

- Bereavement is the period of grief and mourning after a death.
- It is a part of the normal process of reacting to a loss.
- A person may experience grief as a mental, physical, soc'al or emotional reaction.
- Mental reactions can include anger, guilt, anxiety, sadness and despair.
- Physical reactions can include sleeping problems, changes in appetite, physical problems or illness.

(24) (A) Choosing suicide.

- The common emotion in suicide is hopelessness-helplessness.
- A pervasive sense of hopelessness, defined in terms of pessimistic expectations about the future, is even more important than other forms of negative emotion, such as anger and depression, in predicting suicidal behavior.
- The suicidal person is convinced that absolutely nothing can be done to improve his or her situation; no one else can help.

(25) (C) 1-3 days.

- Half-life of fluoxetine is 1-3 days after acute administration and 4-6 days after chronic administration.

(26) (A) Adjustment disorder.

- Adjustment disorder is a stress related, short term, nonpsychotic disturbance
- It happens for a limited time, usually beginning within 3 months of the stressful event.
- It can be acute (if the disturbance lasts less than 6 months) or chronic (if the disturbance lasts for 6 months or longer).
- The symptoms may involve anxious or depressive affect or may present with a disturbance of conduct.
- Stressors may be single or multiple.

(27) (B) Lithium.

- Lithium is the only drug approved for both acute and maintenance treatment, it continues to be the gold standard of maintenance therapy in bipolar disorder, periodic blood tests are required, since lithium can cause thyroid and kidney problems.
- The greatest advantage of sodium valproate may be that it is both well tolerated and effective in patients who do not respond to lithium.

(28) (B) Become greater.

The link between antidepressants and suicidal thinking is not clear and not taking an antidepressant when it is needed also increases the risk of suicide.

(29) (A) Cognitive behavioral therapy.

Children and adolescents who are depressed and express suicidal thoughts or behaviors are in need of an extended evaluation in the hospital to provide maximal protection against the patient's own self destructive impulses and behavior.

- Cognitive behavioral therapy is widely recognized as an effective intervention for the treatment of moderate to severe depression in children and adolescents.
- Cognitive behavioral therapy aims to challenge maladaptive beliefs and enhance problem solving abilities and social competence.

(30) (B) 3-4weeks.

- It is important to remember that the maximal effects of a particular dosage may not be evident for 4-6 weeks.

(31) (A) Escitalopram.

Selective serotonin re-uptake inhibitors are now the first line treatment for major depression.

Selective serotonin re-uptake inhibitors include fluoxetine, sertraline, paroxetine, fluvoxamine, citalopram and escitalopram.

Escitalopram is safer and generally causes fewer serious side effects compared to other types of antidepressants.

(32) (A) Selective serotonin re-uptake inhibitors.

- Selective serotonin re-uptake inhibitors are the primary medications considered for depression. They have relatively mild side effects (except on the sexual life) and reduced risk of overdose, compared to their older tricyclic alternatives.
- Bupropion is possibly more effective if added to selective serotonin re-uptake inhibitors.
- Venlafaxine may be slightly more effective than selective serotonin re-uptake inhibitors; however, it is not recommended as a first line of treatment because of the higher rate of side effects.

Sceletium tortuosum is being used in treating withdrawal symptoms from antidepressants.

(33) (B) Anxiety.

- Complications associated with depression can include: alcohol abuse, substance abuse, anxiety, work or school problems, family conflicts, relationship difficulties, social isolation and suicide and self-mutilation. such as cutting and premature death from other medical conditions.

(34) (A) Benzodiazepines.

Benzodiazepines are the most commonly used drug for the treatment of alcohol withdrawal and are generally safe to use and effective.

Antipsychotic agents are sometimes used as an add-on to first line therapies such as benzodiazepines for controlling agitation or psychosis.

Clomethiazole also inhibits the enzyme alcohol dehydrogenase, which is responsible for breaking down acohol in the body, leading to slow rate of elimination of alcohol from the body, helping to relieve the sudden effects of alcohol withdrawal in alcoholics.

- Trazodone have particular use for treating withdrawal symptoms, especially insomnia, which is persisting beyond the acute withdrawal phase.

(35) (A) Selective serotonin re-uptake inhibitors are leading to sexual dysfunction in 17-41% of patients.

- Release of extracellular serotonin in the brain decreases dopamine and norepinephrine leading to erectile and/or sexual dysfunction.
- Although the lack of placebo control in these studies means they are likely underestimates.

(36) (B) Mania.

- Mania is most often associated with bipolar disorder, characterized by presence of disturbed mood, grand or extravagant style, or expanded self-esteem; pressured speech; reduced need of sleep; talks more often and feels the urge to talk longer; ideas flit through the mind in quick succession, or thoughts race and preoccupy the person; over indulgence in enjoyable behaviors with high risk of negative outcome (e.g. extravagant shopping, sexual adventures or improbable commercial schemes).
- Bipolar disorder and alcoholism commonly co-occur.

(37) (B) Specific anxiety disorder.

- Specific anxiety disorder is a generic term for any kind of anxiety disorder that leads to an unreasonable or irrational fear related to exposure to specific objects or situations.

(38) (A) Inhibiting reuptake of norepinephrine and serotonin leading to increased concentration of these neurotransmitters.

- Tricyclic antidepressants act by inhibiting reuptake of norepinephrine and serotonin by blocking the transporters responsible for reuptake of these neurotransmitters.
- This inhibition elevates the concentration of neurotransmitters in the synapses and triggers further neurotransmission.

(39) (B) Clozapine.

- One possible side effect of clozapine is neutropenia, which causes a reduction in the number of WBCs in the blood.
- It is uncommon but if it happens patient should stop taking clozapine completely.

(40) (A) Benzodiazepines.

- Because benzodiazepines have a rapid anxiolytic sedative effect, they are most commonly used for immediate treatment of insomnia, acute anxiety and agitation or anxiety associated with any psychiatric disorder.
- Before the introduction of benzodiazepines, barbiturates were frequently prescribed, but because of their high abuse potential, their use is much rare now.
- Selective serotonin re-uptake inhibitors work less rapidly compared to the benzodiazepines.

(41) (A) Selective serotonin re-uptake inhibitors.

- Side effects of selective serotonin re-uptake inhibitors include fatigue, nausea, dry mouth, diarrhea, rash, weight loss or weight gain, drowsiness, insomnia, headaches, increased sweating,

(42) (B) Admit to hospital.

Treatment of suicidal ideation can be puzzling due to the fact that several medications have actually been linked to increased suicidal ideation in patients, especially who might have taken antidepressant medications

The main treatment is hospitalization, which allows the patient to be in a secure, supervised environment to prevent their suicidal ideation and from turning into suicide attempts.

(43) (B) False fixed beliefs not in alignment with the culture or surroundings.

Delusion is a false belief based on incorrect inference about external reality that is firmly sustained despite what almost everyone else believes and despite what constitutes incontrovertible and obvious proof of evidence to the contrary.

A belief is not ordinarily accepted by other members of the person's culture or subculture.

(44) (A) 2-4 days.

Symptoms of tobacco withdrawal will peak about 2-4 days later after last use of tobacco.

Common symptoms include, an intense craving for nicotine, anxiety, depression, drowsiness or trouble sleeping, feeling tense, restless or frustrated, headaches, increased appetite, weight gain and problem concentrating.

(45) (A) Amitriptyline.

Amitriptyline is a tricyclic antidepressant drug.

Droperidol, haloperidol and chlorpromazine are typical antipsychotics and are not approved for the treatment of depression.

- Depression may result from long term use of haloperidol as antipsychotics.

(46) (C) Old man retired from community newly diagnosed with herpes zoster and start taking medication. Herpes zoster, more commonly known as shingles, is a potentially painful, disfiguring disease. Post-herpetic neuralgia may lead to suicide.

(47) (B) Seizure.

- Bupropion is used when someone is trying to quit smoking.

The most common side effects of bupropion included: agitation (32%), weight loss (28%), xerostomia (28%), constipation (26 %), headaches (26 %), nausea or vomiting (23%) and dizziness (22%).

(48) (A) Antidepressant's treatment can help in reducing the symptoms.

- Chronic fatigue syndrome is characterized by profound mental and physical exhaustion associated with neuropsychiatric and several other symptoms that are lasting at least for 6 months.

- Must be new (not lifelong), must not be relieved by rest and must result in greater than 50% reduction in previous activity.

Presentation with 4 or more of the following: poor memory/concentration, myalgia, arthralgia, sore throat, tender lymph node, recent onset headache, unrefreshing sleep, excessive tiredness with exercise.

Treatment by: cognitive and exercise therapy, also, diet, physiotherapy, dietary supplement and Antidepressant.

(49) (C) Brief psychotic disorder.

- Brief psychotic disorder is a period of psychosis whose duration is generally shorter, non-re-occurring and not caused by another condition.
- Symptoms generally last at least one day, but not more than one month.

(50) (C) Grandiosity.

- This is a case of mania.
- To be classed as a manic episode, while the disturbed mood is present at least three (or four if only irritability is present) of the following must have been consistently prominent: grand or extravagant style, or expanded self-esteem; pressured speech; reduced need of sleep (e.g. three hours may be sufficient); talks more often and feels the urge to talk longer; ideas flit through the mind in quick succession, or thoughts race and preoccupy the person; over indulgence in enjoyable behaviors with high risk of a negative outcome (e.g. extravagant shopping, sexual adventures or improbable commercial schemes).

(51) (B) Somatization disorder.

- Somatization disorder (also Briquet's syndrome or hysteria) is characterized by recurring, multiple, clinically significant complaints about pain, gastrointestinal, sexual and pseudoneurological symptoms.
- The symptoms involve several different organs and body systems.
- The patient may report a combination of: pain, neurologic problems, gastrointestinal complaints and sexual symptoms.

(52) (B) Admit him at a care center for elderly.

- Elderly patients with dementia are at high risk for the development of psychotic symptoms and behavioral disturbance during the course of this illness.
- Somatic and visual hallucinations may be more common in elderly than in younger patients, particularly when the psychosis is secondary to a medical condition (e.g. Parkinson's disease).
- Seriously ill elderly patients who cannot be appropriately cared for elsewhere should be hospitalized.

(53) (C) Monoamine oxidase inhibitors.

- The most worrisome side effect of monoamine oxidase inhibitors is the tyramine induced hypertensive crisis.
- Tyramine is produced from the natural breakdown of the amino acid tyrosine present in food.
- Monoamine oxidase inhibitors, however, inactivate gastrointestinal metabolism of dietary tyramine, thus allowing intact tyramine to enter the circulation, leading to a hypertensive crisis.
- Adequate concentration of monoamine oxidase inhibitors synthesis should be allowed by avoiding tyramine containing foods for at least 2 weeks, after the last dose of monoamine oxidase inhibitors.

(54) (C) Electroconvulsive therapy.

- Electroconvulsive therapy is typically used in people with serious or life threatening depression that cannot be resolved by other treatments.
- It uses electric impulses to trigger controlled seizures in the brain.

(55) (A) Increase availability of serotonin.

The mechanism of action of the obsessive compulsive disorder drugs is to prevent excess serotonin from being pumped back into the original neuron that released it.

(56) (A) Schizophrenia.

- A person diagnosed with schizophrenia may experience hallucinations most reported are hearing voices), paranoid, bizarre delusions or persecutory in nature (government spy m through television), also he has grandiose delusion (as he believe that he has a special power) and disorganized thinking and speech.

Social withdrawal, sloppiness of dress and hygiene and loss of motivation and judgment are all common in schizophrenia.

(57) (A) Tricyclic antidepressants.

Many of the initial signs are those associated with the anticholinergic effects of tricyclic antidepressants such as dry mouth, blurred vision, urinary retention, constipation, dizziness and vomiting.

This symptoms are caused by the location of norepinephrine receptors in our body; many physical signs are also associated with a tricyclic antidepressants overdose.

(58) (A) Obsessive compulsive disorder.

Obsessive compulsive disorder is an anxiety disorder characterized by intrusive thoughts that produce uneasiness, apprehension, fear, or worry; by repetitive behaviors aimed at reducing the associated anxiety; or by a combination of such obsessions and compulsions.

Symptoms of the disorder include excessive washing or cleaning; repeated checking; extreme hoarding; preoccupation with sexual, violent or religious thoughts; relationship related obsessions; aversion to particular numbers; and nervous rituals, such as opening and closing a door a certain number of times before entering or leaving a room.

(59) (A) Zolpidem.

on-Benzodiazepines medications such as zolpidem and zaleplon are most commonly used for insomnia, because they do not alter sleep architecture and have no hangover effect, tolerance, or rebound insomnia. Benzodiazepines, such as diazepam and flurazepam improve insomnia by reducing rapid eye movement eep, decreasing sleep latency and decreasing nocturnal awakenings.

se of benzodiazepines has been correlated with an increased risk of falling.

Tricyclic antidepressants (trazodone) often used to treat depressed patients with significant insomnia.

(60) (B) Phenobarbital.

Phenobarbital is long acting drug with a half-life of 12-24 hours.

(61) (A) Panic attack.

A panic attack is a sudden episode of intense fear that triggers severe physical reactions when there is no real danger or apparent cause; it can be very frightening and it can be associated with the presence or absence of agoraphobia.

- Agoraphobia is defined as anxiety toward places or situations in which escape may be difficult embarrassing.

(62) (A) Schizophrenia.

- Effective and safe use of clozapine in children with schizophrenia has been reported.

(63) (D) Brief psychotic disorder.

- Brief psychotic disorder is characterized by the presence of delusions, hallucinations, disorganized speech, grossly disorganized behavior or catatonic behavior for at least one day but no more than one month.
- The individual returns to his or her usual level of functioning after this brief period.

(64) (A) Risperidone.

- Atypical antipsychotics (e.g. risperidone, olanzapine) are the first choice in schizophrenia and in schizophreniform disorder and can be used also in mania
- According to side effects, risperidone is fewer side effects than olanzapine.

(65) (C) Mostly associated with severe depression.

- Obsessive neurosis tendencies are common and may manifest themselves as depression, acute or chronic anxiety, obsessive compulsive tendencies, specific phobias (such as social phobia, arachnophobia or any number of other phobias) and some personality disorders (paranoia, schizotypal, borderline, histrionic, avoidant, dependent and obsessive compulsive).

(66) (A) Agoraphobia.

- Agoraphobia is an anxiety disorder characterized by anxiety in situations where the sufferer perceives certain environments as dangerous or uncomfortable, often due the environment's vast openness or crowdedness.
- These situations include, but are not limited to wide open spaces, as well as uncontrollable social situations such as in shopping malls, airports and on bridges.

(67) (D) Benzodiazepines.

- This is a case of catatonic schizophrenia.
- Benzodiazepines are generally the medication of choice to treat catatonic schizophrenia.
- They are typically fast acting, helping relieve catatonic symptoms quickly.
- Echolalia is the automatic speech repetition made by another person.
- Echopraxia is the automatic repetition of movements made by another person.

(68) (A) Recurrences are common in subsequent pregnancies.

- Subsequent pregnancies are associated with an increased risk of another episode, sometimes as high as 50%.
- The symptoms of postpartum psychosis can often begin within days of the delivery, although the mean time to onset is within 2-3 weeks and almost always within 8 weeks of delivery.

(69) (B) Depression.

- In order to differentiate between depression and Alzheimer's disease in elderly, note that symptoms of depression in elderly patients are as follows: mental decline is relatively rapid, knows the correct time, date and where he or she is. difficulty concentrating, language and motor skills are slow, but normal and notices or worries about memory problems.

(70) (A) Postpartum obsessive compulsive disorder.

Postpartum obsessive compulsive disorder is characterized by presence of obsessions (persistent, intrusive thoughts or mental images related to the baby), compulsions (mother may do certain things over again to soothe her fears and obsessions), sense of horror about the obsessions, fear of leaving alone without infant hyper vigilance in protecting the infant. Since the mother with postpartum obsessive compulsive disorder know that their thoughts are bizarre, they are very unlikely to ever act on them

(71) (A) Obsessive compulsive disorder.

Obsessive compulsive disorder is an anxiety disorder in which people have unwanted and repeated thoughts, feelings, ideas, sensations (obsessions), or behaviors that make them feel driven to do something (compulsions)

(72) (A) Generalized anxiety disorder.

Generalized anxiety disorder or overanxious disorder is an excessive anxiety and worry about a number of events or activities (usually related to the future), occurring more than days for at least 6 months, symptoms associated with at least three of the following symptoms: restlessness or feeling keyed up or on edge easily, fatigue, difficulty concentrating, irritability, muscle tension and sleep disturbance.

(73) (A) Late life depression.

Clinical depression is common in the elderly, be related to a physical illness. Depression that first develops in later life usually after 60-year-old is more commonly associated with physical health problems associated with aging

(74) (A) Auditory hallucination.

Auditory hallucinations (also known as Paracusia) hearing or more voices; symptoms are usually associated with psychotic disorders such as schizophrenia or major mental disorders. In the diagnosis of these conditions Although many, not suffering from mental illness may sometimes hear voices as well

(75) (B) Selective serotonin re-uptake inhibitors.

Selective serotonin re-uptake inhibitors are widely accepted as first line pharmacological intervention for moderate to severe depressive disorders in children and adolescents. In acute randomized clinical trials have demonstrated efficacy of fluoxetine, citalopram and nortriptyline in the treatment of major depression in children and adolescents

(76) (A) Haloperidol.

About 2/3 of agitated, elderly patients with various forms of dementia improve when they are given dopamine receptor antagonists (atypical antipsychotics). dose of high potency drugs e.g. 0.5-1 mg/day of haloperidol are used.

(77) (A) Specific phobia.

- A specific phobia is a strong, persisting fear of an object or situation
- Situational phobias involve a fear of specific situations, such as flying, riding in a car or on public transportation, driving, going over bridges or in tunnels, or of being in a closed place (such as an elevator).

(78) (A) Antipsychotics.

- Common conditions in which antipsychotics might be used include schizophrenia, bipolar disorder and delusional disorder.
- These medications were developed originally to treat symptoms associated with schizophrenia (such as hallucinations and delusions), but they are widely used to treat similar symptoms in Alzheimer's disease.
- These are very effective in treating hallucinations and delusions.

(79) (A) Somatization.

- Somatization disorder is an illness of multiple somatic complaints in multiple organ systems that occur over a period of several years and results in significant impairment or treatment seeking, or both.

(80) (A) Form.

- Thought disorder or formal thought disorder refers to disorganized thinking as evidenced by disorganized speech.
- Specific thought disorders include derailment, poverty of speech, tangentially, illogicality, perseveration, neologism and thought blocking.

(81) (B) Agoraphobia.

- Agoraphobia is a generalized fear of open spaces, social situations, crowds, etc and is associated with avoidance of these stimuli.

(82) (A) Increased availability of serotonin.

- Selective serotonin re-uptake inhibitors block or delay the re-absorption of the neurotransmitter, serotonin, by the original (presynaptic) nerves it was released from.
- This effect increases the levels of serotonin within the synapses.

(83) (A) Schizophrenia.

- Schizophrenia is a mental disorder characterized by a breakdown of thought processes and by a deficit of typical emotional responses.
- Common symptoms include auditory hallucinations, paranoid or bizarre delusions, or disorganized speech and thinking; and it is accompanied by significant social or occupational dysfunction.

(84) (B) Severe or major depression.

- Electroconvulsive therapy may be considered as the first line therapy for severe or major depression.
- It is sometimes used when the patient is at high risk of harming themselves or others (where there is clear evidence of repeated suicide attempts or significantly aggressive behavior) or where psychotic features are prominent

(85) (A) Initially start with monotherapy even in severe depression.

Management of major depression disorder.

1 Pharmacotherapy is the primary therapy for major depression effective in 50-70%, allow for 2-6 weeks taking effect, treating more than 6 months (selective serotonin re-uptake inhibitors tricyclic antidepressants and monoamine oxidase inhibitors).

2 Psychotherapy: It is the treatment of choice in those under 18-year-old; psychotherapy combined with antidepressant is more effective than either treatment alone.

3- Electroconvulsive therapy may improve mood in people with severe depression or suicidal thoughts who do not get better with other treatments

4- Phototherapy is effective for patient who has a seasonal pattern.

(86) (B) Performance anxiety.

Stage fright or performance anxiety is the anxiety, fear, or persistent phobia which may occur in an individual before performing in front of an audience, whether actually or potentially (for example, performing before a camera)

(87) (D) IV.

General injections act rapidly with onset of action in 15-30 seconds for IV 10-20 minutes for IM 15-30 minutes for SC.

(88) (B) Hypochondriasis.

Hypochondriasis or hypochondria (sometimes referred to as health phobia or health anxiety) refers to excessive worry about having a serious illness.

A debilitating condition is the result of an inaccurate perception of the body's condition despite absence of an actual medical condition.

(89) (A) Hyperventilation syndrome.

Hyperventilation syndrome or chronic hyperventilation syndrome is a respiratory disorder, which is psychological or physiological origin, involves breathing too deeply or too rapidly (hyperventilation) It may present with chest pain and a tingling sensation in the fingertips and around the mouth (paresthesia) and may accompany a panic attack.

Many people with panic disorder or agoraphobia will experience hyperventilation syndrome.

(90) (B) Social phobia.

Social anxiety disorder (also known as social phobia) is an anxiety disorder which is one of the most common psychiatric disorders

It is characterized by intense fear in social situations, causing considerable distress and impaired ability to perform certain daily tasks.

(91) (A) Behavioral therapy.

The diagnosis is called pica disorder.

Currently, behavioral strategies are considered to be the most effective in the treatment of pica.

(92) (A) Sertraline.

- Sertraline is an antidepressant drug of the selective serotonin re-uptake inhibitors.
- Like other selective serotonin re uptake inhibitors sertraline is associated with certain side effects which include sexual arousal disorder and difficulty achieving orgasm.

(93) (B) Liver function test.

Side effects of lithium:

- 1- **Thyroid:** goiter, hypothyroidism, exophthalmos and hyperthyroidism.
- 2- **Renal:** inability to concentrate, morphologic changes polyuria (nephrogenic diabetes insipidus), reduced glomerular filtration rate, nephrotic syndrome and renal tubular acidosis.
- 3- **Pregnant women:** causes birth defects in first trimester, most common malformations involve the cardiovascular system, most commonly Ebstein's anomaly of the tricuspid valves.
- 4 - **The only gastrointestinal tract associated adverse effects for lithium are nausea, decreased appetite, vomiting and diarrhea; however, there is no known side effect of this agent is on the liver.**

(94) (C) Obsessive compulsive disorder.

- Obsessive compulsive disorder is an anxiety disorder characterized by intrusive thoughts leading to uneasiness, apprehension, fear, or worry and by repetitive behavior in an attempt of reducing anxiety.

(95) (A) Premenstrual dysphoric disorder.

- Premenstrual dysphoric disorder is characterized by depressed or labile mood, anxiety, irritability, anger and other symptoms occurring exclusively during the 2 weeks preceding menses.

(96) (A) Propranolol.

- Propranolol falls into the broad pharmacologic category known as beta-blockers.
- Beta-blockers block beta-adrenergic receptors leading to reduced heart rate and control blood pressure so that the patient becomes less anxious.
- It is very helpful for performance anxiety, such as giving presentations or speeches.

(97) (C) Generalized anxiety disorder.

- Generalized anxiety disorder is characterized by persistent, excessive and unrealistic worry about everyday things.
- People with this disorder experience exaggerated worry and tension, often expecting the worst, even when there is no apparent reason for concern.
- They anticipate disaster and are often overly concerned about money, health, family, work, or other issues.

(98) (C) Obsessive compulsive personality disorder.

- Obsessive compulsive personality disorder is a disorder characterized by a pervasive pattern of preoccupation with orderliness, perfectionism, mental and interpersonal control at the expense of flexibility, openness and efficiency.
- In contrast to people with obsessive compulsive disorder, behaviors are rational and desirable in people with obsessive compulsive personality disorder..
- Obsessive compulsive personality disorder is different from obsessive compulsive disorder and is characterized mainly by perfectionism while obsessive compulsive disorder is characterized by repetitive actions due to compulsion.

(99) (A) Risperidone.

Weight gain is a common side effect of risperidone.

- **It occurs in up to 5% of people and associated with an increase in appetite, a rise in blood cholesterol levels that may increase the risk of developing heart disease or diabetes.**

(100) (A) Bupropion.

- **One of the side effects of bupropion is migraine.**
- **It affects 1-4% of patients using bupropion.**

(101) (A) Postpartum blues.

- **After the baby is born, many new mothers have the postpartum blues or the baby blues.**
- **The new mother is more irritable, cries more easily, feels sad and feels confused.**
- **The postpartum blues peak 3-5 days after delivery.**

They usually end within 10 days of the baby's birth.

(102) (A) Major depression with psychomotor symptoms.

electroconvulsive therapy should be considered for patients who are in the acute phase of major depressive disorder and have a high degree of symptom severity and functional impairment or who have psychotic symptoms or catatonia.

electroconvulsive therapy may also be the treatment of choice for patients for whom the treatment onset is urgently needed, such as patients who are suicidal.

(103) (A) Hypochondriasis.

hypochondriasis is a mental disorder characterized by excessive fear of or preoccupation with a serious illness, despite medical testing and reassurance to the contrary, was formerly called hypochondriacal neurosis.

(104) (B) Liver and renal function tests.

buspirone is metabolized by the liver and excreted by the kidneys.

a pharmacokinetic study in patients with impaired hepatic or renal function demonstrated increased plasma levels and a lengthened half-life of buspirone. therefore, the administration of buspirone to patients with severe hepatic or renal impairment cannot be recommended.

(105) (C) Loss of eye contact.

depressed mood states can also exhibit the mood through physical complaints, such as showing sad facial expressions (frowning) and poor eye contact.

a depressed patient will avoid eye contact, moving eyes downwards or away, with slow eye blinking rate (any of these could be considered normal behavior in any individual).

(106) (B) Clozapine.

there are many side effects for clozapine; they include leukopenia, drooling (especially at night) and cardiac abnormalities (1%).

past marketing clinical experience has included ventricular tachycardia, cardiac arrest, QT prolongation and Torsades de Pointes.

(107) (C) Selective serotonin re-uptake inhibitors.

- General side effects of selective serotonin re-uptake inhibitors are mostly present during the first 1-4 weeks while the body adapts to the drug.
- Almost all selective serotonin re-uptake inhibitors are known to cause one or more of these symptoms: insomnia and/or changes in sleep pattern, feeling agitated or shaky and anxiety.

(108) (C) Clock drawing test.

- Clock drawing test is a simple test that can be used as a part of a neurological test or as a screening tool for Alzheimer's and other types of dementia.

(109) (A) Include family in the therapy.

- The most important first step in managing postpartum depression is recognizing the problem and taking action to deal with it.
- The support and understanding of the partner, family and friends play important role in recovery.

(110) (A) Alzheimer's disease.

- Alzheimer's disease is the most common form of dementia, a general term for memory loss and other intellectual abilities serious enough to interfere with daily life.
- It begins slowly and involves the parts of the brain that control thought, memory and language.
- People with Alzheimer's disease may have trouble remembering things that happened recently or names of people they know.

(111) (A) Schizophrenia.

- Schizophrenia causes alterations in the brain and the way it perceives reality, resulting in the hallmark symptoms of hallucinations and delusions.

(112) (A) Diazepam.

- Benzodiazepines, such as diazepam or lorazepam, are the most commonly used drug for the treatment of alcohol withdrawal.
- Antipsychotic agents, such as haloperidol, are sometimes used for alcohol withdrawal as an add-on to first-line treatments such as benzodiazepines for controlling agitation or psychosis.
- Clozapine is particularly risky (induces myocarditis); if used, extreme caution is required.

(113) (A) Alzheimer's disease.

- Most common causes of dementia for Alzheimer's disease are age and family history are risk factors.
- Etiology unknown but toxic beta-amyloid deposit in brain.
- New patients usually present with amnesia, followed by language deficit, apraxia, depression, agitation and finally apraxia (inability to perform skilled movement)
- Diagnosis by exclusion: suggested by clinical feature and by progressive cognitive course without substantial motor impairment.
- The definitive diagnosis of Alzheimer's disease can be made only through autopsy after death.
- MRI and CT may show atrophy, ventricle enlargement and can rule out other causes.
- On brain microscopy amyloid plaques and neurofibrillary Tangles.
- Death usually occurring secondary to aspiration pneumonia.
- Treatment is done by cholinesterase inhibitor.
- A good family support is needed for the patients.

(114) (D) Reassure her and ask her about the

stressors, is is a case of conversion disorder

- Conversion disorder causes patients to suffer from neurological symptoms, such as numbness, blindness, paralysis or Tics. usually a definite organic cause

as thought that symptoms arise in response to stressful situations affecting a patient's mental health
late onset, clearly identifiable stress at the time and short time between onset and treatment are associated with favorable prognosis.

the diagnosis requires two elements: the exclusion of neurological disease the exclusion of feigning the determination of a psychological mechanism

(115) (A) Fluoxetine.

fluoxetine is an antidepressant drug of the selective serotonin re-uptake inhibitors, effective serotonin re-uptake inhibitors remain a first line pharmacological treatment for depression in children and adolescents for whom psychotherapy has failed or is unavailable, suicidal ideation and behaviors merit close monitoring.

fluoxetine is the only antidepressant specifically approved for the treatment of depression in children 8-year-old

(116) (B) Hypochondriasis.

hypochondriasis is characterized primarily by physical symptoms for which no demonstrable organic explanations or physical findings exist.

fear or ideas based on the misinterpretation of bodily signs and sensations as evidence of disease, illness persists despite appropriate medical evaluations and reassurance.

(117) (A) Selective serotonin re-uptake inhibitors.

effective serotonin re-uptake inhibitors are generally recommended as first line agents to treat anxiety disorder

because beta-blockers do not affect the emotional symptoms of anxiety such as worry, they are most helpful for phobias, particularly social phobia and performance anxiety.

some people tolerate beta-blockers well and find that those are successful in managing anxiety symptoms

But others find that the side effects increase their overall anxiety, prescription of beta-blockers is (off-label), meaning that they are not approved for use; however, sometimes those are used anyway.

(118) (A) Dysthymia.

dysthymia is a mood disorder consisting of the same cognitive and physical problems as in depression, less severe but longer lasting symptoms, which persists for at least 2 years.

(119) (B) Galantamine.

cholinesterase inhibitors include donepezil, rivastigmine and galantamine which are primarily used in the treatment of dementia.

Galantamine reduces the action of acetylcholinesterase and therefore tends to increase the concentration of acetylcholine in the brain.

(120) (C) Alzheimer's disease.

- In Alzheimer's disease a number of microscopic changes occur within the brain.
- The 2 major findings in the Alzheimer's brain are amyloid plaques and neurofibrillary tangles.

(121) (A) Start treating with a single agent even if the patient has severe depression.

- Traditional guidelines call a sequence of single antidepressants, for the treatment of major depression.
- Augmentation with a second agent generally only happens when the first agent is well tolerated and provides some symptomatic improvement.
- Most skilled clinicians who treat severe depression and treatment resistant depression with inadequate responses to single agents have seen patients respond to combinations of drugs, as well as to single drugs with more than one mechanism of action.

(122) (A) Body dysmorphic syndrome.

- Body dysmorphic disorder is a type of mental illness, a somatoform disorder, where the affected person is concerned with body image, manifested as excessive concern about and preoccupation with a perceived defect of their physical features.
- The person thinks they have a defect in either one feature or several features of their body, which causes psychological distress leading to clinically significant distress or impairs occupational or social functioning.

(123) (A) Trichotillomania.

- Trichotillomania is a compulsive disorder resulting in alopecia from repetitive hair manipulations by the patient's own hand.
- Trichotillomania is one of the self-induced primary psychiatric disorders.
- Regardless of its pathogenesis, trichotillomania is a kind of alopecia or loss of hair from skin that must be differentiated from other kinds of alopecia which are diagnosed by a dermatologist (e.g. alopecia areata, traction alopecia androgenetic alopecia, alopecia mucinosa).

(124) (A) Lorazepam.

- Lorazepam has strong sedative/hypnotic effects and the duration of clinical effects from a single dose makes it an appropriate choice for the short term treatment of insomnia, in particular when severe anxiety is present.
- It is not recommended for use in patients with a primary depressive disorder or psychosis.
- This case to be diagnosed as a major depression; it must have 5 or more symptoms of depression over 2 weeks period.
- One of the very common side effects of fluoxetine is difficulty sleeping.

(125) (D) Mostly they think that the family responds like this.

- Battered woman syndrome occur at all socioeconomic levels.
- Most battered women report that they thought that the assaults would stop; unfortunately, studies

(126) (B) Multiple clinic appointment.

- **Somatization disorder is a somatoform disorder characterized by recurring, multiple, clinically significant complaints about pain, gastrointestinal, sexual and pseudoneurological symptoms.**
- **Cognitive behavioral therapy is the best established treatment for a variety of somatoform disorders including somatization disorder.**

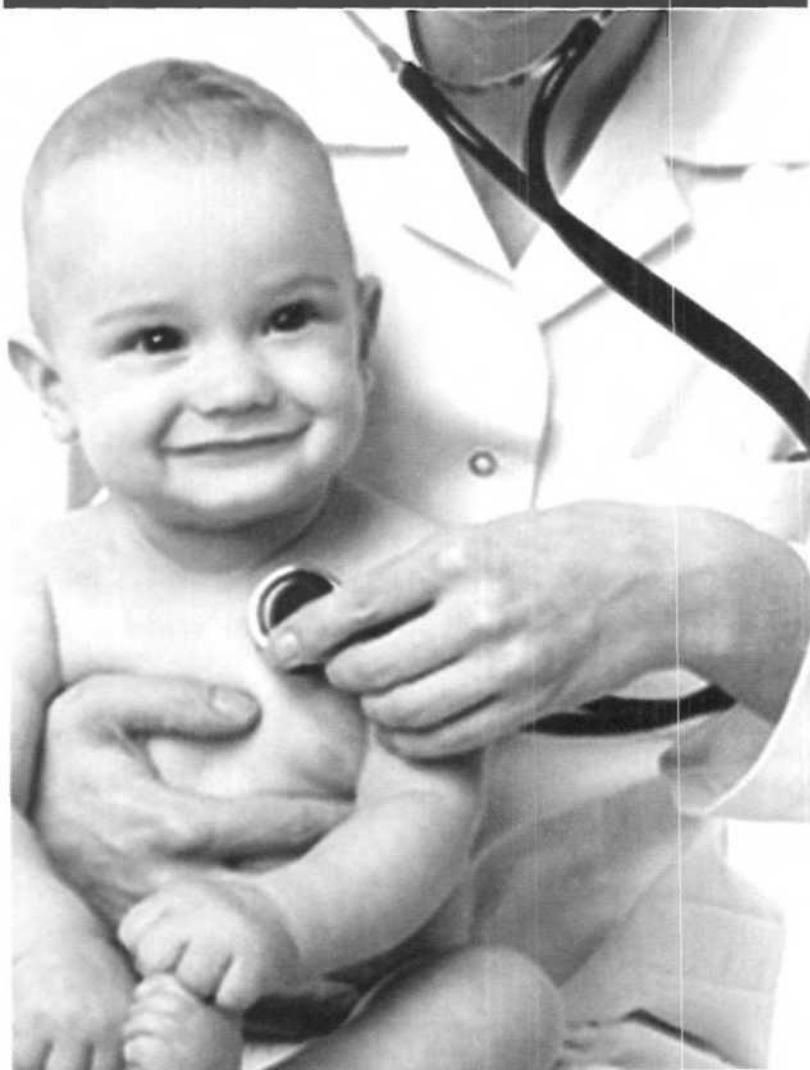
(127) (B) Post-partum psychosis.

- **Psychosis can be manifested through one or more of the following:**
 - 1- **Delusion is a fixed false belief.**
 - 2- **Hallucination is a false perception (e.g. visual, auditory, or olfactory).**
 - 3- **Thought disorganization.**

(128) (D) Postural hypotension.

- **Cautions: cardiac abnormalities may occur, monitor ECG.**
- **Do not discontinue amitriptyline abruptly because withdrawal symptoms may occur.**
- **Side effects: dry mouth, constipation, weight gain, postural hypotension, drowsiness, confusion, headache and visual disturbance.**

PEDIATRICS



- (1) An 8-year-old child presented with this auscultation: late systolic murmur best heard over the sternal border, high pitch, crescendo, decrescendo. What is the diagnosis?
- (A) Physiological murmur.
 - (B) Innocent murmur.
 - (C) Ejection systolic murmur.
 - (D) Systolic regurgitation murmur.
- (2) A 10-year-old child was diagnosed with rheumatic fever without any defect of the heart. How many years are needed for his treatment with prophylactic antibiotics?
- (A) 1 years.
 - (B) 3 years.
 - (C) 6 years.
 - (D) 15 years.
- (3) A 6-month-old child presented with difficulty breathing and sweating. Clinical examination shows hyperactive precordium with loud S2 and pansystolic murmur grade 3/6 best heard in the left 3rd parasternal region. What is the diagnosis?
- (A) Atrial septal defect.
 - (B) Large ventricular septal defect.
 - (C) Mitral regurgitation.
 - (D) Aortic regurgitation.
- (4) A child presented with hypertrophic right atrium. What is the congenital anomalies which can lead to this condition?
- (A) Atrial septal defect.
 - (B) Ventricular septal defect.
 - (C) Tetralogy of Fallot.
 - (D) dextro-transposition of the great arteries.
- (5) All of the following are true about Tetralogy of Fallot except?
- (A) Pulmonary stenosis.
 - (B) Ventricular septal defect.
 - (C) Right atrium hypertrophy.
 - (D) Aortic Stenosis.
- (6) A 12-year-old boy brought by his parent for routine evaluation, he is obese but otherwise healthy; his parents want to measure his cholesterol level. What is the best indicator of measuring this child cholesterol?
- (A) Hisparent desire.
 - (B) Family history of early cerebrovascular accident.
 - (C) High BMI.**
 - (D) Family history of obesity.

(7) A 15-year-old boy came for clinical evaluation to participate in sport activity; his brother died suddenly while he is walking to his work because of heart disease. On examination; everything is normal, no murmurs and equal pulses in all extremities. What should be excluding in this patient before he participates in sport activity?

- (A) Atrial septal defect.**
- (6) Bicuspid valve.**
- (C) Ventricular septal defect.**
- (D) Hypertrophic cardiomyopathy.**

(8) What is the cause of cardiac arrest in children?

- (A) Primary respiratory arrest.**
- (B) Hypovolemic shock.**
- (C) Neurogenic shock.**
- (D) Congenital heart disease.**

(9) What it is the most common congenital heart disease associated with rheumatic heart disease?

- (A) Ventricular septal defect.**
- (B) Atrial septal defect.**
- (C) Coarctation of aorta.**
- (D) Valvular heart disease.**

(10) A 15-year-old patient presented with palpitation and fatigue. On investigation right ventricular hypertrophy, right ventricular overload and right branch blockage were identified. What is the diagnosis?

- (A) Atrial septal defect.**
- (B) Ventricular septal defect.**
- (C) Coartaction of aorta.**
- (D) Pulmonary stenosis.**

(11) A 9-month-old child with known case of congenital heart disease presented with central and peripheral cyanosis. What is the diagnosis?

- (A) Tetralogy of Fallot.**
- (B) Coarctation of aorta.**
- (C) Truncus arteriosus.**
- (D) Atrial septal defect.**

(12) A child presented with congestive heart failure and several hemangioma on the body. What is the most likely internal place for the hemangioma?

- (A) Liver.**
- (B) Spleen.**
- (C) Intestine.**
- (D) Pancreas.**

(13) What is true about rheumatic fever in children?

- (A) Antibiotic prophylaxis before future dental procedures.**
- (B) 2 Blood cultures and presence of Osier nodes are diagnostic according to Duke's criteria.**
- (C) Duke's criteria are not dependable for the diagnosis.**
- (D) 1 blood culture + new murmur are diagnostic.**

(14) A child presented with night sweating, myalgia, arthralgia and pericarditis. What is the most likely diagnosis?

- (A) Kawasaki disease.**
- (B) Still's disease.**
- (C) Scarlet fever.**
- (D) Lyme Disease.**

(15) What is the best way to decrease the allergy in asthmatic child?

- (A) Cover pillow and bed with impermeable material.**
- (B) Keep pets a way.**
- (C) Prophylactic medication.**
- (D) None of the above.**

(16) A child presented with drooling saliva and stridor and hyperextended neck. What is the diagnosis?

- (A) Croup.**
- (B) Pertussis.**
- (C) Laryngitis.**
- (D) Epiglottitis.**

(17) A child presented to ER with wheezing, dyspnea and muscle contraction. What is the best initial treatment?

- (A) Theophylline.**
- (B) Salbutamol nebulizer.**
- (C) Oralsteroid.**
- (D) Magnesium Sulphate.**

(18) A 4-year-old child wakes up from sleep because of a croup. Which one of the following a differential diagnosis?

- (A) Foreign body.**
- (B) Bronchiolitis.**
- (C) Cystic fibrosis.**
- (D) Congenital heart disease.**

(19) A young patient with mild intermittent bronchial asthma attacks once to twice a week. What is the best treatment?

- (A) Inhaled short acting beta-agonist as needed.**
- (B) Inhaled steroid.**
- (C) Long acting beta-agonist as needed.**
- (D) Ask him to come to ER as required.**

- (20) A 3-month-old infant presented with tachypnea and respiratory distress. X-ray shows lower and mid lobe infiltration, opaque right lung and shifted trachea to left. What is the responsible organism?
- (A) Haemophilus influenza.
 - (B) Streptococcus pneumonia (pneumococcus).
 - (C) Mycoplasma pneumonia.
 - (D) Respiratory syncytial virus.
- (21) A child presented to ER with shortness of breath, anxiety and wheezing after bee sting. On examination: vital signs; BP = 75/55 mmHg, HR = 120/min and RR = 20/min. What is the management?
- (A) Start IV fluid, IM epinephrine and antihistamine.
 - (B) Antihistamine injection and reassure the patient.
 - (C) Ventilation.
 - (D) Antihistamine then IM Epinephrine.
- (22) A child with neck x-ray shows typical subglottic narrowing (steeple sign). What is the diagnosis?
- (A) Croup.
 - (B) Epiglottitis.
 - (C) Tracheitis.
 - (D) Laryngitis.
- (23) A 6-month-old infant presented with signs and symptoms of respiratory distress (fever, tachypnea, intercostal recession, expiratory wheeze and nasal flare). What is the best initial management?
- (A) Oxygen.
 - (B) Erythromycin.
 - (C) Bronchodilator.
 - (D) Epinephrine.
- (24) A child with history of upper respiratory tract infection presented with large epiglottitis. On examination: respiratory distress was found. What is the management?
- (A) Endotracheal intubation.
 - (B) Tracheostomy.
 - (C) Epinephrine.
 - (D) Pulse oximetry.
- (25) A 6-month-old infant presented with cough and wheezy chest. What is the diagnosis?
- (A) Bronchial asthma.
 - (B) Bronchiolitis.
 - (C) Pneumonia.
 - (D) Foreign body aspiration.
- (26) A 3-year-old child presented with shortness of breath and cough at night which resolved by itself in 2 days; he has history of rash on his hands and allergic rhinitis. What is the most likely diagnosis?
- (A) Croup.
 - (B) Bronchial asthma.

- (27) A 4-year-old child presented with 2 days history of shortness of breath, a seal like cough with no sputum and mild fever. On examination he did not look ill or in distress. What is the diagnosis?
- (A) Acute epiglottitis.
 - (B) Croup.
 - (C) Angioedema.
 - (D) Pneumonia.
- (28) What is the most common organism which causes croup?
- (A) Human parainfluenza viruses.
 - (B) Haemophilus influenzae.
 - (C) Pneumococcus.
 - (D) Respiratory syncytial virus.
- (29) A child with known case of atopic dermatitis presented with stridor at night and barking cough on and off from time to time. What is the diagnosis?
- (A) Bronchial asthma.
 - (B) Croup.
 - (C) Pertussis.
 - (D) Spasmodic croup.
- (30) An infant patient has upper respiratory tract infection presented with dyspnea and wheezing came to ER. He had temperature 38°C working accessory muscles and chest retractions with cyanosis. What is the diagnosis?
- (A) Viral pneumonia.
 - (B) Bacterial pneumonia.
 - (C) Acute bronchitis.
 - (D) Acute bronchiolitis.
- (31) A child is having a croup early morning. What is the most common cause?
- (A) Post nasal drip.
 - (B) Viral Infection.
 - (C) Exposure to cold at all the night.
 - (D) Seasonal variation.
- (32) A child present with runny nose, sore throat, feels like fullness in ear with no fever. On examination it was found that his ear is normal, nose congested and erythematous tonsils. What is the diagnosis?
- (A) Acute otitis media.
 - (B) Viral upper respiratory tract infection.
 - (C) Spasmodic croup.
 - (D) Acute tonsillitis.
- (33) A 2-year-old child presented with cyanosis and diagnosed with bronchiolitis. What is the best initial treatment?
- (A) Oxygen.
 - (B) Antibiotics.
 - (C) Corticosteroids.
 - (D) beta2-agonist.

(34) A child known case of moderate bronchial asthma and he is on beta 2-agonist. What should be added to decrease the recurrence of attacks?

- (A) Corticosteroids inhaler.**
- (B) Epinephrine.**
- (C) Long acting theophylline.**
- (D) Budesonide inhaler.**

(35) A child brought to ER due to swallowing battery. By investigations x-ray shows the battery has lodged in the esophagus. What is the management?

- (A) Bronchoscopic removal.**
- (B) Insert Foley catheter.**
- (C) Observation for 12 hours.**
- (D) Endoscopic removal.**

(36) A child patient presented with chest infection on first day of admission he was treated with cefotaxime, next day patient's state became worse with decrease perfusion and x-rays show complete right side opacification and hydrothorax. What is the causative organism?

- (A) Streptococcus pneumonia (pneumococcus).**
- (B) Staphylococcus aureus.**
- (C) Haemophilus influenza type b.**
- (D) Respiratory syncytial virus.**

(37) A child with a known case of bronchial asthma and is on beclomethasone. What is the likely side effect?

- (A) Increase activity.**
- (B) Intraocular hypertension.**
- (C) Growth retardation.**
- (D) Epilepsy.**

(38) A child presented with history of malaise, conjunctivitis and whooping cough for 2 days. What is the diagnosis?

- (A) Pertussis.**
- (B) Croup.**
- (C) Epiglottitis.**
- (D) Pneumonia.**

(39) An infant presented with rhinitis and persistent cough. On examination: he is under respiratory distress and had hypercapnia, acidosis and positive agglutination test. He is treated by ribavirin. What is the diagnosis?

- (A) Pertussis.**
- (B) Respiratory syncytial virus.**
- (C) Bacteria infection.**
- (D) Fungal infection.**

(40) A child presented with barking cough and fever. On examination: he has a fever of 38°C. What is the diagnosis?

- (A) Croup.
- (B) Epiglottitis.
- (C) Laryngitis.
- (D) Pneumonia.

(41) Premature newborn with 32 weeks of diabetic mother. On examination; he is cyanosed, grunting with flaring of nostrils. By investigations; chest x- ray shows diffuse air bronchogram. What is the diagnosis?

- (A) Insufficient surfactant.
- (B) Tracheoesophageal fistula.
- (C) Diaphragmatic hernia.
- (D) Pneumonia.

(42) A 4-year-old boy presented to ER with fever, drooling saliva and inability to drink or eat. On examination there was a congested oropharynx. What is the most appropriate diagnosis?

- (A) Bacterial pneumonia.
- (B) Viral pneumonia.
- (C) Acute epiglottitis.
- (D) Croups.

(43) An infant presented with vomiting, he passed stool immediately after birth. On examination: there is abdominal distension. What is the diagnosis?

- (A) Hirschsprung disease.
- (B) Pyloric stenosis.
- (C) Imperforated anus.
- (D) Midgut volvulus.

(44) A 3-day-old baby of mother is positive for hepatitis B virus. What is the management?

- (A) One dose immunoglobulin and vaccination.
- (B) Antiviral.
- (C) Antibiotics.
- (D) Three doses hepatitis B virus vaccine.

(45) What is the characteristic imaging sign in child with duodenal atresia?

- (A) Double bubble in abdominal x-ray.
- (B) Sentinel loop sign.
- (C) Multiple air fluid level.



(46) What is the duration for oral penicillin V in pharyngitis treatment?

- (A) 7 days.**
- (B) 10 days.**
- (C) 14 days.**
- (D) 20 days.**

(47) A 2-month-old infant presented with vomiting and diarrhea. On examination; he is pale, crying but with no tears, dry mucous membrane with increase in the skin turgor and depressed anterior fontanel; he is diagnosed with severe gastroenteritis. What is the management?

- (A) Aggressive oral rehydration therapy.**
- (B) IV fluid.**
- (C) Oral rehydration salts solution given to mother to rehydrate the infant.**
- (D) Colloids.**

(48) A 6-month-old baby diagnosed with mild viral diarrhea. How much oral rehydration salts should be given for treatment?

- (A) Start with 100 ml/kg for 4 hours then 50 ml/kg/day.**
- (B) Start with 50 ml/kg for 4 hours then 50 ml/kg/day.**
- (C) Start with 100 ml/kg for 4 hours then 100 ml/kg/day.**
- (D) Start with 50 ml/kg for 4 hours then 100 ml/kg/day.**

(49) What is the management of mild diarrhea?

- (A) Oral antibiotic.**
- (B) IV fluid.**
- (C) Antidiarrheal.**
- (D) Oral rehydration salts.**

(50) A 7-year-old child had history of chest infection which was treated with antibiotics.

The patient presented 6 weeks after cessation of antibiotics with abdominal pain, fever and profuse watery diarrhea for the last month. Which of the following organisms is responsible for the patient condition?

- (A) Giardia lamblia.**
- (B) Clostridium difficile.**
- (C) E. coli.**
- (D) Clostridium perfringens.**

(51) A 2-month-old infant with vomiting after each meal, he is in 50% percentile, he passed meconium early and stool after birth. What is the diagnosis?

- (A) Midgut volvulus.**
- (B) Meconium ileus.**
- (C) Hirschsprung disease.**
- (D) Pyloric stenosis.**

(52) An 8-month-old infant presented with vomiting and diarrhea. On examination: sunken eyes, loss of skin turgor and depressed anterior fontanel, he is diagnosed with gastroenteritis. What is the percent of his dehydration?

- (A) 5%.
- (B) 10%.
- (C) 15%.
- (D) 20%.

(53) A 1-month-old infant presented to ER with bilious vomiting, constipation and abdominal pain. What is the best investigation to diagnose this case?

- (A) X-ray of upper gastrointestinal tract.
- (B) X-ray of abdomen.
- (C) US of upper gastrointestinal tract.
- (D) US of abdomen.

(54) An infant presented with bright blood, black stool and foul smelling. What is the best investigation to diagnose this case?

- (A) US of abdomen.
- (B) Radioisotope scan.**
- (C) Angiogram.
- (D) Barium meal.

(55) A 2-month-old infant presented with vomiting after each meal. On examination: he is within 50% percentile growth. By Investigations; results of lab are normal. What is the management?

- (A) Reassurance and follow up.
- (B) Surgical referral.
- (C) Proton pump inhibitors.
- (D) CT of abdomen.

(56) A child presented with skin rash in buttock and hematuria. What is the diagnosis?

- (A) Henoch-Schonlein purpura.
- (B) Idiopathic thrombocytopenic purpura.
- (C) Polyarteritis nodosa.
- (D) Coagulation abnormalities.

(57) A child presented with gum and nose bleeding and bruising all over the body after an episode of upper respiratory tract infection. What is the diagnosis?

- (A) Henoch-Schonlein purpura.
- (B) Idiopathic thrombocytopenic purpura.
- (C) Vitamin K deficiency.
- (D) Hemophilia.

(58) What is the best investigation to confirm the diagnosis of thalassemia?

- (A) Genetic test.**
- (B) Iron study.**
- (C) Blood smear.**
- (D) Hemoglobin electrophoresis.**

(59) What is the treatment of Von Willebrand disease?

- (A) Fresh frozen plasma.**
- (B) Factor VIII replacement.**
- (C) Desmopressin.**
- (D) Anti-fibrinolytic or clot-stabilizing medications.**

(60) What is the vaccine should be given to a child with sickle cell disease?

- (A) Hepatitis B virus vaccine.**
- (B) Haemophilus influenza vaccine.**
- (C) Pneumococcal vaccine.**
- (D) Both A and B.**

(61) A 15-year-old boy presented with signs and symptoms of anemia. By investigations; CBC shows microcytic hypochromic anemia. What is the diagnosis?

- (A) Thalassemia.**
- (B) Iron deficiency anemia.**
- (C) Sickle cell anemia.**
- (D) G6PD deficiency.**

(62) What is the hematological disease which may occur in children treated with heparin and fresh frozen plasma?

- (A) Hemophilia A.**
- (B) Hemophilia B.**
- (C) Von Willebrand disease.**
- (D) DIC.**

(63) A child presented with pallor and it was reported that he eats little meat. By investigation: CBC shows microcytic hypochromic anemia. What is the management?

- (A) Multivitamin with iron daily.**
- (B) Ask to eat meat.**
- (C) Prescribe treatment if iron deficiency anemia is confirmed.**
- (D) Hemoglobin electrophoresis.**

(64) A 3-year-old child presented with pallor, he eats very little red meat and drink lots of milk. By investigation; he diagnosed with iron deficiency anemia. What is the treatment?

- (A) Trial of iron therapy.**
- (B) Give iron and multivitamin.**
- (C) Send home with observation.**
- (D) Advice to avoid meat.**

(65) What is the treatment to increase fetal hemoglobin in sickle cell disease?

- (A) Hydroxyurea.**
- (B) Erythropoietin.**
- (C) Folic acid.**
- (D) Hydroxyurea and recombinant erythropoietin.**

(66) A child presented with hemarthrosis due to mild trauma; there is also past history of similar episodes. What is the diagnosis?

- (A) Thrombocytopenia.**
- (B) Factor 8 deficiency.**
- (C) Arthritis.**
- (D) Calcium deficiency.**

(67) A 9-year-old patient presented with abdominal pain and joint pain, the abdominal pain is colicky and accompanied by nausea, vomiting and diarrhea; there is also blood and mucus in the stools, pain in joints involved in the ankles and knees. On examination there is purpura appear on the legs and buttock. What is the diagnosis?

- (A) Meningococcal infections.**
- (B) Rocky mountain spotted fever.**
- (C) Systemic lupus erythematosus.**
- (D) Henoch-Schonlein purpura.**

(68) A child presented with severe headache which is unilateral, throbbing, aggravated by light and increased by changing head position. What is the diagnosis?

- (A) Migraine.**
- (B) Cluster headache.**
- (C) Tension headache.**
- (D) Sinus headache.**

(69) Which of the following is true about Guillain-Barre syndrome?

- (A) Descending paralysis start from upper limbs.**
- (B) Ascending paralysis start from the lower limbs.**
- (C) Normal CSF to confirm the diagnosis.**
- (D) Need ECG to confirm the diagnosis.**

(70) What is the best way to diagnose migraine?

- (A) MRI of brain.**
- (B) CT of brain.**
- (C) EEG.**
- (D) Full history and examination.**

(71) What is true about CSF in aseptic meningitis?

- (A) Low protein.**
- (B) High glucose.**
- (C) Neutrophils.**
- (D) Lymphocytosis.**

(72) A child present with stiffing neck, fever and headache, he is diagnosed with suspect meningitis.

What is the initial treatment?

- (A) Tobramycin.
- (B) Levofloxacin.
- (C) Penicillin (ampicillin).
- (D) Doxycydine.

(73) A 8-month-old child presented with 3 days fever (40°C degree), vomiting, convulsion, poor feeding and poor sleep. On examination: dehydrated, depressed anterior fontanel, red ears, with no neck stiffness and his 3-year-old sibling asymptomatic. What is the investigation to confirm the diagnosis?

- (A) Chest x-ray.
- (B) CBC with differential.
- (C) Blood culture.
- (D) CSF analysis.

(74) A 6-year-old child presents with straddling gait and inability to stand or walk without support, he is irritable with vomiting 3 times, has a history of chickenpox 3 weeks ago. On examination everything is normal except resistance when trying to flex the neck. What is the most likely diagnosis?

- (A) Friedreich ataxia.
- (B) Acute cerebellar ataxia.
- (C) Meningoencephalitis.
- (D) Guillain-Barre syndrome.

(75) What is the first sign of increase intracranial pressure?

- (A) Vomiting.
- (B) Nausea.
- (C) Ipsilateral pupil constrict.
- (D) Contralateral pupil constrict.

(76) A 5-year-old child presented with history of fever and swelling of the face anterior to the both ears (parotid gland enlargement). What is the most common complication?

- (A) Meningitis.
- (B) Labyrinthitis.
- (C) Orchitis.
- (D) Thrombocytopenia.

(77) A 12-year-old patient presents with headache, neck stiffness, fever, confusion, vomiting and photophobia with rapidly spreading petechial rash. On examination; the rash consists of numerous small, irregular red spots on the trunk and lower extremities. What is the treatment?

- (A) Penicillin.
- (B) Ampicillin.
- (C) Vancomycin.
- (D) Aminoglycoside.

(78) Which vitamin is given to newborn to stop bleeding?

- (A) Vitamin A.
- (B) Vitamin D.
- (C) Vitamin K.
- (D) Vitamin C.

(79) What is the most significant finding in newborn examination?

- (A) Hydrocele.
- (B) Absent femoral pulses.**
- (C) Congenital heart disease.
- (D) Breast with milk discharge.

(80) A neonate presented with enlargement of eye. On examination; absence of pupil red reflex, ophthalmoscopy shows retina mass. What is the diagnosis?

- (A) Neuroblastoma.
- (B) Retinoplastoma.
- (C) Glaucoma.
- (D) Cataract.

(81) A baby with Apgar score 3 in 1 minute (cyanosis, weak breathing, pulse is 60). What is the management?

- (A) Warming and drying.
- (B) Normal phenomena in 1 minute.
- (C) Compare with the 5 minute score.
- (D) Ventilation.

(82) On examination of newborn the skin shows papules or pustules over erythema base. What is the diagnosis?

- (A) Transient neonatal pustular melanosis.
- (B) Herpes simplex.
- (C) Measles.
- (D) Erythema toxicum neonatorum.

(83) A newborn presented with jaundice. On examination; he has hepatosplenomegaly. By investigation; high liver function test. What is the diagnosis?

- (A) Congenital TB.
- (B) Rubella.
- (C) AIDS.
- (D) Congenital cytomegalovirus infection.

(84) When the breast feeding should be started in neonate?

- (A) As soon as possible.
- (B) After 2 hours.
- (C) After 5 hours.
- (D) According to the mother desire.

- (85) A 9-day-old infant presented to well-baby clinic with mild jaundice and yellow scaling on face and chest; he is otherwise normal, on breastfeeding and doing well. What is the diagnosis?
- (A) Breastfeed jaundice.
 - (B) Pathological jaundice.
 - (C) Physiological jaundice.
 - (D) None of the above.
- (86) A newborn presented with left eye purulent discharge, redness and swelling of eyelid. By investigations; culture showed Gram-negative diplococci. What is the treatment?
- (A) Cephalosporin IV.
 - (B) Cephalosporin IM.
 - (C) Fluroquinolone oral.
 - (D) Sulfonamide topical.
- (87) Which of the following is true regarding Apgar score?
- (A) Total score =12.
 - (B) Discoloration is not important.
 - (C) Heart rate significant.
 - (D) Assessed in the second day of life.
- (88) A newborn presented with white creamy lesion on the mouth after taking course of antibiotic. What is the treatment?
- (A) Oral nystatin.
 - (B) Steroid.
 - (C) Antibiotic.
 - (D) Antiviral.
- (89) A premature baby with 28 weeks gestation admitted in NICU, 900 gram weight, otherwise normal. What is the management?
- (A) Give milk orally.
 - (B) Glucose infusion.
 - (C) Broad spectrum antibiotic.
 - (D) Electrolyte correction.
- (90) What is the best way to prevent infection in neonate?
- (A) Wash hands before and in between examination of patients.
 - (B) Giving prophylaxis.
 - (C) Gloves wearing.
 - (D) Minimum newborns number per room.
- (91) A newborn presented with vomiting after every meal intake. On examination; mild dehydration with no other clinical signs. No tests ordered yet. What is the next step?
- (A) Abdominal CT.
 - (B) Reassure the parents.
 - (C) Refer to surgery.
 - (D) Discharge on oral rehydration salts.

(92) A newborn presented with red lump on left shoulder. On examination it was found to be compressible with sharply demarcated. What is the diagnosis?

- (A) Cavernous hemangioma.**
- (B) Infectious lump.**
- (C) Diagnosis after biopsy.**
- (D) Diagnosis after US.**

(93) At which age child should speak a few words?

- (A) 12-month-old.**
- (B) 24-month-old.**
- (C) 36-month-old.**
- (D) 30-month-old.**

(94) What is the most common cause of pediatrics failure to thrive?

- (A) Cystic fibrosis.**
- (B) Psychosocial.**
- (C) Protein and milk intolerance.**
- (D) Anemia.**

(95) When the baby should start walking?

- (A) 9-month-old.**
- (B) 8-month-old.**
- (C) 13-month-old.**
- (D) 10-month-old.**

(96) A baby can sit without support, walk by holding furniture, pincer grasp, pull to stand. How old is he?

- (A) 8-month-old.**
- (B) 10-month-old.**
- (C) 12-month-old.**
- (D) 18-month-old.**

(97) An 11-month-old child presented with complains of delayed speech, he can only say baba and mama. What is the first step in evaluating him?

- (A) Physical examination.**
- (B) Developmental assessment.**
- (C) Head CT.**
- (D) Hearing test.**

(98) Which of the following describe the normal developmental stage for a 6-month-old child?

- (A) Sits without support.**
- (B) No head lag.**
- (C) Role from prone to supine position.**
- (D) Role from supine to prone position.**

(99) A child recognizes 4 colors, 5 words, hops on one foot. What is his age?

- (A) 12-month-old.
- (B) 24-month-old.
- (C) 36-month-old.
- (D) 48-month-old.

(100) What a 4-year-old child can do?

- (A) Draw square and triangle.
- (B) Say complete sentence.
- (C) Tie his shoes.
- (D) Drive a bicycle.

(101) What is true about DPT vaccine?

- (A) DPT is not contraindicated during pregnancy.
- (B) DPT is not contraindicated during breastfeeding.
- (C) DPT is not contraindicated in school aging.
- (D) DPT is contraindicated in pregnancy.

(102) A 6-year-old child was born with hepatitis B surface antigen positive; his mother is hepatitis B surface antigen positive; he was only vaccinated by BCG after birth. What are the vaccines should be given now?

- (A) Hepatitis B virus + Polio + DPT + Hib.
- (B) Hepatitis B virus + Polio + DT + MMR + HiB.
- (C) Hepatitis B virus + Polio + DT + MMR.
- (D) Hepatitis B virus + MMR + DPT + Hib.

(103) What is the allergy should be excluded before giving flu vaccine?

- (A) Chicken.
- (B) Egg.
- (C) Fish.
- (D) Antibiotics.

(104) What is true about pneumococcal vaccine in 11-year-old sickle cell patient?

- (A) Not recommended for healthy people.
- (B) Not necessary for patient whom their under 2-year-old.
- (C) 23-valent pneumococcal vaccine is given to 2-year-old children or older.
- (D) 23-valent pneumococcal vaccine is giving to whom less than 2-year-old.

(105) In which degree should most of the vaccines be stored?

- (A) Between 2-8°C.
- (B) Between 8-12°C.
- (C) Between 13-18°C.
- (D) Between 18-22°C.

(106) How to give varicella vaccine?

- (A) 2 doses in 2 weeks apart.
- (B) 2 doses in 6 week apart.
- (C) 2 doses in 2 month apart.
- (D) 2 doses in 1 year apart.

(107) All of the following are live vaccines except:

- (A) MMR vaccine.
- (B) Oral Polio.
- (C) Varicella.
- (D) Hepatitis B vaccine.

(108) How to give varicella vaccine for one who has not been vaccinated before?

- (A) The interval between administration of varicella vaccine and MMR must be greater than 28 days.
- (B) It is given at the same site with MMR.
- (C) Not given in more than 2-year-old.
- (D) It better to be given in the first year of life.

(109) A child presented with fever for one week, sore throat and fatigue. On examination low grade fever

and congested throat were noted. By investigation negative antistreptolysin O and positive Epstein Barr virus were identified. What is the diagnosis?

- (A) Infectious mononucleosis.
- (B) Upper respiratory tract infection.
- (C) Liver disease.
- (D) TB.

(110) What is the most common organism causing cellulitis at 6-24-month-old?

- (A) Streptococcus.**
- (B) Haemophilus influenza.
- (C) Staphylococcus aureus.
- (D) E. coli.

(111) Child presented with skin lesion at elbow. On examination: positive wood lamp illumination were noted. What is the diagnosis?

- (A) Bacterial infection.
- (B) Fungal infection.
- (C) Viral infection.
- (D) Immunological reaction.



(112) What is the complication of rapid correction of hyponatremia?

- (A) Brain edema.
- (B) Arrhythmia.
- (C) Renal injury.

(113) A mother let her child go to bathroom and avoid drinking before sleeping. What is this management used for?

- (A) Enuresis.**
- (B) Nephrotic syndrome.**
- (C) Urinary tract infection.**
- (D) Interstitial cystitis.**

(114) Which of the following is true about the treatment of streptococcus pharyngitis?

- (A) Decreased incidence of Streptococcus glomerulonephritis.**
- (B) Incidence of rheumatic fever will increase.**
- (C) Increase incidence of Streptococcal glomerulonephritis.**
- (D) No need for treatment.**

(115) A baby brought to ER after falling down from stairs. On examination: there were multiple contusions and some of them were old. By investigations: x-ray showed fracture in radius. What is the management?

- (A) Hospitalization and call social worker.**
- (B) Splinter for his hand.**
- (C) Fixation.**
- (D) Cast.**

(116) A child presented with thigh pain due to running. On examination there is no redness or tenderness. What is the management?

- (A) Elevation of the leg and cold compression.**
- (B) Splint.**
- (C) Surgery.**
- (D) Analgesics.**

(117) A child presented with sore throat. On examination neck mass on the left side with massive hepatosplenomegaly was noted. What is the next step?

- (A) Bone marrow aspiration.**
- (B) Epstein Barr virus serology.**
- (C) Liver function test.**
- (D) ESR.**

(118) A child presented with cough, runny nose and fever. On examination: enlarged tonsils were noted. He is diagnosed with tonsillitis. What is the management?

- (A) Acetaminophen and throat swab.**
- (B) Antibiotics.**
- (C) Tonsillectomy.**
- (D) Gargling.**

(119) A 5-year-old child presented with fever and swelling of the face anterior to the both ears. What is the diagnosis?

- (A) Mumps.**
- (B) Parotid tumor.**
- (C) Lymphadenitis.**
- (D) Abscess.**

(120) A child is scheduled for elective surgery, his weight is 22 kg. What is the rate in which the IV fluid should be given?

- (A) Give 40 ml/hour.
- (B) Give 65 ml/hour.
- (C) Give 80 ml/hour.
- (D) Give 90 ml/hour.

(121) A 4-year-old child presented with his parents complaining about him of spitting his food. What is the management?

- (A) Reassure.
- (B) Endoscopy.
- (C) X-ray.
- (D) US.

(122) A child presented at ER with history of fall from bunk bed then he cried and vomited 2 times, but no history of loss of consciousness. On examination: neurological examination is normal, no change in mental state, with no signs of skull fracture. What is the next step?

- (A) X-ray of skull.
- (B) MRI of brain.
- (C) CT of brain.
- (D) Observation.

(123) A 6-year-old boy presented with history of eating paper and clay. What is the management?

- (A) Behavioral therapy.
- (B) Head CT.
- (C) Fluoxetine.
- (D) Reassure, it will disappear with time.

(124) A 2-year-old baby presented with gray to green patch in lower back. On examination: no redness or hotness. What is the diagnosis?

- (A) Child abuse.
- (B) Bleeding tendency.
- (C) Mongolian spot.
- (D) Immunological reaction.



(125) A child presented with fever and sore throat. On examination; low grade fever, cervical lymph nodes enlargement, with erythema of the pharynx were noted. By investigations: *rapid strep* test is negative with positive Epstein Barr virus. What is the management?

- (A) Antibiotics and antipyretic.
- (B) Antipyretic and IV fluid.
- (C) Culture and sensitivity.
- (D) Antiviral.

(126) What is the best way to reduce the weight in obese child?

- (A) Decrease fat intake.**
- (B) Decrease calories intake.**
- (C) Decrease carbohydrate intake.**
- (D) Multi factorial intervention with family.**

(127) What is the most common tumor in children?

- (A) Acute lymphoblastic leukemia.**
- (B) Rhabdomyosarcoma.**
- (C) Wilms tumor.**
- (D) Osteoma.**

(128) A child presented with coryza, skin rash, conjunctivitis and multiple spots in the mouth. What is the diagnosis?

- (A) Measles.**
- (B) Rubella.**
- (C) Mumps**
- (D) Infectious mononucleosis.**

(129) A child presented with erythema and swelling in his hand after 18 hours of bee sting. What is the management?

- (A) Epinephrine.**
- (B) Antihistamine drugs.**
- (C) Antibiotics.**
- (D) Hospitalization.**

(130) After doing CPR on arrested child and showing asystole, what should be give?

- (A) Atropine.**
- (B) Adrenaline.**
- (C) Lidocaine.**
- (D) Propranolol.**

(131) A child presented to ER with fever and abrasion on his elbow due to fall down on it. On examination redness, demarcated swelling and tenderness were noted. What is the diagnosis?

- (A) Gonococcal arthritis.**
- (B) Synovitis of elbow.**
- (C) Cellulitis of elbow.**
- (D) Erysipelas.**

(132) What is the most common intra-abdominal tumor in children?

- (A) Wilms tumor.**
- (B) Lymphoma.**
- (C) Colon Cancer.**
- (D) Intestinal malignancy.**

(133) A child presented with severe bowing of the legs. On examination; he is more than 90% of the normal percentile height. What is best investigation to diagnose this patient?

(A) Lower extremities x-ray.

(B) Pelvic x-ray.

(C) CBC.

(D) Alkaline Phosphatase.

(134) An 11-year-old child presented with dark color urine and edema, his parents gave history of upper respiratory tract infection. On examination; he has hypertension. What is the next step to diagnose?

(A) Renal function test.

(B) Urine sediments microscope.

(C) Kidney US.

(D) Renal Biopsy.

(135) A 2-year-old child presented with dental decay in his teeth and the parent said he sleep with milk bottle in his mouth. What is the diagnosis?

(A) Excessive fluoride ingestion.

(B) Insufficient fluoride intake.

(C) Milkbottle decay.

(D) Tetracycline exposure.

(136) A child presented with lip swelling and erythema due to bite before 14 days. What is the type of hypersensitivity?

(A) Type 1.

(B) Type 2.

(C) Type 3.

(D) Type 4.

(137) Which of the following is true about holding breath spell?

(A) Mostly occurs between 5-10-year-old.

(B) Increase risk of epilepsy.

(C) A known precipitant cause of generalized convulsion.

(D) Diazepam may decrease the attack can occur in absence of emotional upset.

(138) A malnourished child presented with pedal edema and distended abdomen. On examination: thinning hair, loss of teeth, skin depigmentation and dermatitis, very dry eyes with wrinkled cornea and there are cells in anterior chamber and enlarged liver with fatty infiltrates. What is the diagnosis?

(A) Marasmus.

(B) Kwashiorkor.

(C) Cachexia.

(D) Water intoxication.

(139) What is the mode of transmission of scabies in child?

- (A) Personal contact.**
- (B) Blood transfusion.**
- (C) Airborne.**
- (D) Water.**

(140) A child presented with vomiting and walking difficulty. On examination it was found that he has nystagmus. What is the diagnosis?

- (A) Vitamin A deficiency.**
- (B) Pellagra.**
- (C) Wet Beriberi.**
- (D) Dry Beriberi.**

(141) A 12-year-old boy presented with edema of lower limb, upper limb and face, with other cardiac symptoms due to vitamin deficiency. What is the diagnosis?

- (A) Wet Beriberi.**
- (B) Dry Beriberi.**
- (C) Vitamin A deficiency.**
- (D) Vitamin D deficiency.**

(142) A child brought to ER due to ingestion of unknown medicine and presented with decreased level of consciousness, urination, diarrhea, diaphoresis, lacrimation, excitation and salivation. On examination: he has pinpoint pupil. What is the treatment?

- (A) Gastric lavage.**
- (B) Activated charcoal.**
- (C) Atropine.**
- (D) Naloxone.**

(143) Which of the following Trisomy occur in Down syndrome?

- (A) Trisomy 7.**
- (B) Trisomy 14.**
- (C) Trisomy 18.**
- (D) Trisomy 21.**

(144) Which vitamin deficiency will lead to Beriberi in child?

- (A) Vitamin B1.**
- (B) Vitamin B2.**
- (C) Vitamin B6.**
- (D) Vitamin B12.**

(145) A child with history of upper respiratory tract infection presented with bilateral knee pain. What is the diagnosis?

- (A) Glomerulonephritis.**
- (B) Rheumatic fever.**
- (C) Reactive arthritis.**
- (D) Juvenile rheumatoid arthritis.**

(146) A child presented with severe skin itching involving the abdomen, hand and face with papulovesicular rash. What is the diagnosis?

- (A) Chickenpox.**
- (B) Dermatitis herpetiform.**
- (C) Measles.**
- (D) Infectious mononucleosis.**

(147) A child presented with painless lump in neck. Which of the following is the diagnosis?

- (A) Hodgkin's lymphoma.**
- (B) Pharyngitis.**
- (C) Infectious mononucleosis.**
- (D) Lymphadenitis.**

(148) A child presented to ER following ingestion of corrosive material. On examination; he is pale, drooling and hypotensive. What is the management?

- (A) Establish airway.**
- (B) Give him milk to drink.**
- (C) Gastric lavage.**
- (D) Ipecac.**

(149) A child presented with malnutrition, but no edema. By investigations, it was found that he has low protein. What is the diagnosis?

- (A) Kwashiorkor.**
- (B) Liver disease.**
- (C) Vitamin deficiency.**
- (D) Marasmus.**

(150) What is antidote of acetaminophen toxicity?

- (A) Atropine.**
- (B) N-acetylcysteine.**
- (C) Potassium.**
- (D) Dexamine.**

(151) What is the genetic defect in cystic fibrosis?

- (A) Short arm of human chromosome 7.**
- (B) Long arm of human chromosome 7.**
- (C) Short arm of human chromosome 17.**
- (D) Long arm of human chromosome 17.**

(152) Which of the following drugs need urgent medical intervention in case of accidental drug ingestion in child?

- (A) Penicillin.**
- (B) Diphenhydramine.**
- (C) Oral contraceptive pills.**
- (D) Quinine or Quinidine.**

(153) A child presented to the clinic with complains of difficulty standing up from squatting position. On examination it was noted that he has positive Gowers' sign. Which is the most common diagnostic test?

- (A) Muscle biopsy.
- (B) EMG.
- (C) CT scan.
- (D) ESR, CRP.

(154) A 6-month-old boy presented with fever; why antipyretic management is needed?

- (A) Febrile convulsion.
- (B) Epilepsy.
- (C) Dissemination of bacteria.
- (D) Sweating.

(155) A child was diagnosed with botulism. What the advice should be given to his parent?

- (A) Never eat canned food again.
- (B) Store canned food at home.
- (C) Boil canned food for 40-50 minutes.
- (D) Check expiry date of canned food.

(156) A child presented to ER with iron overdose. What is the best immediate management?

- (A) Gastric lavage.
- (B) Induce vomiting manually.
- (C) Emetic drugs.
- (D) Ipecac.

(157) Which of the following is true about congenital hip dislocation?

- (A) Abducting at flexed hip can cause click.
- (B) The only treatment is surgical.
- (C) Not reduced with flexion and abduction of the hip.
- (D) It is more common in boys than girls.

(158) A childon nutritional supplementation presented to ER with 2 hours history of vomiting, nausea and abdominal pain. What is the diagnosis?

- (A) Hypervitaminosis.
- (B) Iron overdose.
- (C) Aspirin poisoning.
- (D) Acetaminophen poisoning.

(159) A 3-year-old presented to ER due to ingestion of aspirin. What is the best gastric decontamination?

- (A) Gastric lavage.
- (B) Activated charcoal.
- (C) Total bowel irrigation.
- (D) Ipecac.

(160) An infant presented with erythema in diaper site. What is the treatment?

- (A) Topical nystatin.**
- (B) Topical antiviral.**
- (C) Topical antibiotic.**
- (D) Do not use diapers for many days.**

(161) A 2-year-old child presented with hair loss in the temporal area, boggy swelling and multiple pustules. What is the diagnosis?

- (A) Trichotillomania.**
- (B) Aplasia cutis congenital.**
- (C) Kerion.**
- (D) Favus.**

(162) An infant presented with genital rash which spares genital fold, did not response to antibiotics treatment. What is the most likely diagnosis?

- (A) Candida albicans.**
- (B) Napkin dermatitis.**
- (C) Atopic dermatitis.**
- (D) Seborrheic dermatitis.**

(163) A child presented with bowing legs and posing head and diagnosed with rickets. What is the type of deficiency he has?

- (A) Vitamin D deficiency.**
- (B) Calcium deficiency.**
- (C) Phosphate deficiency.**
- (D) Alkaline phosphatase deficiency.**

(164) A child presented with iron toxicity several hours ago. By investigations serum iron concentration = 700 pg/dl was noted. What is the treatment?

- (A) Gastric lavage.**
- (B) Activated charcoal.**
- (C) Ipecac.**
- (D) Deferoxamine IV.**

(165) A child presented with recurrent urinary tract infection. What is the conservative management for him beside medical treatment?

- (A) Increase fluid intake.**
- (B) Good hygiene.**
- (C) Fiber diet.**
- (D) Immediate voiding.**

(166) What is the best treatment for 7-year-old child with nocturnal enuresis?

- (A) Imipramine.**
- (B) Desmopressin.**
- (C) Clonidine.**
- (D) Both A and B.**

(167) What is the best treatment for 5-year-old child with nocturnal enuresis?

- (A) Imipramine.
- (B) Desmopressin.
- (C) Alarm therapy.
- (D) Both A and B.

(168) Which of the following is true about malaria in children?

- (A) Crescent shape gametocyte of vivax is diagnostic in the stool.
- (B) The immediate treatment primaquine for 3 days.
- (C) 72 hours treatment of malaria is sufficient.
- (D) the most common cause is falciparum.

(169) An 8-year-old boy presented with complains of short stature. On examination; he has a height of a 6-year-old. By investigations bone scan show a 5.5-year-old. What is the diagnosis?

- (A) Steroid side effect.
- (B) Genetic cause.
- (C) Hypochondroplasia.
- (D) Hypothyroidism.

(170) What is the drug used in attention deficit hyperactivity disorder?

- (A) Methylphenidate.
- (B) Imipramine.
- (C) Clonidine.
- (D) Vasopressin.

(171) A child presented with enuresis. What is the most important investigation?

- (A) Urinalysis is the most important screening test in a child with enuresis.
- (B) Urine culture.
- (C) CBC.
- (D) Renal function test.

(172) A child presented with history of fever for 2 days, anorexia, nausea and vomiting then petechiae rash appearing in the trunk and spreading all over the body. On examinations he looks severely ill. What is the diagnosis?

- (A) Measles.
- (B) Meningococcal meningitis.
- (C) Mountain fever.
- (D) Kawasaki disease.

(173) An 18-month-old baby presented with history of bite by her brother. What is the management?

- (A) Augmentin.
- (B) Tetanus toxoid.
- (C) Suturing.
- (D) Dressing only.

(174) A baby presented with excessive crying and blood in the stool. By investigations abdominal x-ray shows obstructive pattern, looks like intussusceptions. What is the management?

- (A) Immediate surgical treatment.
- (B) Elective surgical treatment.
- (C) Barium enema.
- (D) Observation.

(175) What is the mode of inheritance polycystic kidney?

- (A) Autosomal recessive.
- (B) Autosomal dominant.
- (C) Autosomal recessive or autosomal dominant.
- (D) Not affected by genetic.

(176) What is the kind of acid base balance in aspirin overdose?

- (A) Metabolic alkalosis with respiratory acidosis.
- (B) Metabolic acidosis with respiratory alkalosis.
- (C) Respiratory alkalosis with metabolic acidosis.
- (D) Respiratory acidosis with metabolic alkalosis.

(177) A child presented with severe pain in the calf muscles associated with tingling and burning sensation especially at night, which prevent child from sleeping very well. In the day time he is alright. What is the diagnosis?

- (A) Idiopathic leg syndrome.
- (B) Compartment syndrome.
- (C) Restless leg syndrome.
- (D) Functional disease.

(178) Which of the following is true about pathology in Henoch-Schonlein purpura?

- (A) Involve arterioles, venules and capillaries.
- (B) C4 deposition.
- (C) Platelets dysfunction.
- (D) Factor 8 deficiency.

(179) A 9-year-old female child presented to ER after ingestion of almost 20 tablets of oral contraceptive pills. She is clinically stable without any signs or symptoms. What is the management?

- (A) Refer her to gynecologist.
- (B) Refer her to psychiatrist.
- (C) Do toxicology study.
- (D) No need for intervention.

ANSWERS

PEDIATRICS



(1) (C) Ejection systolic murmur.

- Ejection systolic murmurs start a short time after a well-heard S1, increases in intensity, peak and then decrease in intensity; they usually end before the S2.

(2) (D) 15 years.

- Duration of prophylaxis depends on presence or absent of carditis, but for children without carditis, duration is 5 years or until 21-year-old (which ever is longer).
- Rheumatic fever with carditis and residual heart disease (persistent valvular disease). -10 years or until 40-year-old (which ever is longer); lifetime prophylaxis may be needed.
- Rheumatic fever with carditis but no residual heart disease (no valvular disease). -10 years or until 21-year-old (which ever is longer).
- Rheumatic fever without carditis. * 5 years or until 21-year-old (which ever is longer).

(3) (B) Large ventricular septal defect.

- Large ventricular septal defect presents the following: dyspnea, feeding difficulties, poor growth, profuse sweating, recurrent respiratory tract infections, heart failure or pulmonary hypertension, pericardial bulge, hyperdynamic, a loud widely propagated murmur, functional mitral stenosis, increased intensity of pulmonary component of S2.

(4) (A) Atrial septal defect.

- In atrial septal defect the chest roentgenogram shows varying degrees of enlargement of the right ventricle and atrium, depending on the size of the shunt.

(5) (D) Aortic Stenosis.

- Tetralogy of Fallot component are:
 - 1- Pulmonary stenosis.
 - 2- Ventricular septal defect.
 - 3- Right atrium hypertrophy.
 - 4- Overriding of aorta.

(6) (B) Family history of early cerebrovascular accident.

- Children and young adults with a family history of myocardial infarction have increased carotid intima-media thickness, higher prevalence of coronary calcium and endothelial dysfunction.

The most important evidence relating risk in youth clinical cerebrovascular accident is the observed association of risk factors for atherosclerosis to clinically manifest cerebrovascular conditions.

(7) (D) Hypertrophic cardiomyopathy.

- Hypertrophic cardiomyopathies are usually familial with autosomal dominant inheritance, but may occur sporadically.
- It is initially be difficult to diagnose.
- It is a condition in which myocardial thickness is increased.
- In general, the septal thickness is more marked than that of the posterior wall.
- Older children may be asymptomatic, with sudden death as the initial presentation.

(8) (A) Primary respiratory arrest.

- The cardiac arrest in children is uncommon.
- Progressive respiratory insufficiency accounts for 60% of all pediatrics arrests.

(9) (D) Valvular heart disease.

- Mitral valve disease is the most common cardiac problem seen in rheumatic heart disease.

(10) (D) Pulmonary stenosis.

- The ECG shows gross right ventricular hypertrophy, frequently accompanied by a tall, spiked P wave.
- Radiographic studies confirm the presence of cardiac enlargement with prominence of the right ventricle and right atrium.

(11) (A) Tetralogy of Fallot.

- Tetralogy of Fallot: cyanosis is not present at birth, but with increasing hypertrophy of the right ventricular infundibulum and patient growth, cyanosis occurs later in the first year of life.
- It is most prominent in the mucous membranes of the lips and mouth and in the fingernails and toenails.
- In infants with severe degrees of right ventricular outflow obstruction, neonatal cyanosis is noted immediately. In these infants, pulmonary blood flow may be dependent on flow through the ductus arteriosus.
- When the ductus begins to close in the first few hours or days of life, severe cyanosis and circulatory collapse may occur.

(12) (A) Liver.

- The internal hemangiomas may involve any of these organs: the liver, gastrointestinal tract, central nervous system and lungs are the most common sites.

(13) (A) Antibiotic prophylaxis before future dental procedures.

- Antimicrobial prophylaxis before various procedures as well as any dental manipulation may reduce the incidence of infective endocarditis in susceptible patients.

(14) (A) Kawasaki disease.

- Kawasaki disease is a vasculitis, sometimes involving the coronary arteries, that tends to occur in infants and children between 1-8-year-old.
- It is characterized by prolonged fever, exanthem, conjunctivitis, mucous membrane inflammation and lymphadenopathy.
- Coronary artery aneurysms may develop and rupture or cause myocardial infarction.
- Early manifestations include acute myocarditis with heart failure, arrhythmias, endocarditis and pericarditis.
- Arthritis or arthralgia (mainly involving large joints) occurs in about 33% of patients.
- Other clinical features include urethritis, aseptic meningitis, hepatitis, otitis, vomiting, diarrhea,

(15) (A) Cover pillow and bed with impermeable material.

- The single best thing you can do to control indoor allergies is to use allergy proof covers on all of your bedding, including pillows, mattresses and box springs.

(16) (D) Epiglottitis.

- Epiglottitis; drooling is usually present and the neck is hyperextended in an attempt to maintain the airway.

The child may assume the tripod position, sitting upright and leaning forward with the chin up and mouth open while bracing on the arms.

- A brief period of air hunger with restlessness may be followed by rapidly increasing cyanosis and coma.
- Stridor is a late finding and suggests near complete airway obstruction.

(17) (B) Salbutamol nebulizer.

- This is a case of bronchial asthma.
- Initial treatment includes supplemental oxygen, inhaled beta-agonist: nebulized salbutamol every 20 minutes or continuously for one hour.

(18) (A) Foreign body.

- Although croup is considered the most common cause of stridor and respiratory distress in the pediatrics population, a variety of disorders should be considered during diagnosis, depending on clinical history and presenting symptoms.
- The cause may be one of the following: airway foreign body, bacterial tracheitis, diphtheria, epiglottitis, inhalation injury, laryngeal fractures, laryngomalacia, measles, mononucleosis and Epstein-Barr virus infection and peritonsillar abscess.

(19) (A) Inhaled short acting beta-agonist as needed.

- Quick relief medications (short acting inhaled beta-agonists, inhaled anticholinergics and short course of systemic corticosteroids) are used in the management of acute bronchial asthma symptoms.

(20) (B) Streptococcus pneumonia (pneumococcus).

- Streptococcus pneumonia (pneumococcus) is the most common bacterial pathogen, followed by Chlamydia pneumonia and Mycoplasma pneumonia.

(21) (A) Start IV fluid, IM epinephrine and antihistamine.

According to the age of child if he is old the vital signs indicate shock, if he is young these may be less severe.

Anaphylaxis is a medical emergency that may require resuscitation measures such as airway management, supplemental oxygen, large volumes of IV fluid and close monitoring.

- Administration of epinephrine is the treatment of choice.
- Antihistamines and steroids (e.g. dexamethasone) often used as adjuncts.
- A period of observation in hospital for between 2-24 hours is recommended for people once they have returned to normal due to concerns of biphasic anaphylaxis.

(22) (A) Croup.

- Croup is a clinical diagnosis and does not require a radiograph of the neck.
- Radiographs of the neck may show the typical subglottic narrowing or (steeple sign) of croup on the posteroanterior view.

(23) (A) Oxygen.

- Warm humidified oxygen should be provided at a concentration initially sufficient to keep arterial levels between 50-70 mmHg (85-95% saturation) to maintain normal tissue oxygenation while minimizing the risk of oxygen toxicity.

(24) (A) Endotracheal intubation.

- Establishing an airway by nasotracheal intubation or less often by tracheostomy is indicated in patients with epiglottitis, regardless of the degree of apparent respiratory distress, because as many as 6% of children with epiglottitis without an artificial airway die, compared with <1% of those with an artificial airway.

(25) (B) Bronchiolitis.

- Bronchial asthma: after 2-year-old.
- Bronchitis: in children less than 2-year-old.
- Pneumonia: associated with crepitation.
- Foreign body aspiration: sudden wheezing.

(26) (B) Bronchial asthma.

- In bronchial asthma there is a history of recurrence on exposure to allergens or viral infections and associating atopic manifestations.
- Respiratory symptoms can be worse at night especially during prolonged exacerbations triggered by respiratory infections or inhaled allergens.

(27) (B) Croup.

	Croup	Epiglottitis
Onset	Days	Hours
Flu like symptoms	Yes	No
Cough	Sever	Absent
Able to drink	Yes	No
Drooling saliva	No	Yes
Fever	< 38°C	> 38°C
Stridor	Harsh	Soft
Voice	Hoarse	Muffled

(28) (A) Human parainfluenza viruses.

- The human parainfluenza viruses (types 1, 2 and 3) account for 75% of cases; other viruses associated with this disease include Haemophilus influenzae A and B, adenovirus, respiratory syncytial virus and measles
- Haemophilus influenzae A has been associated with severe laryngo-tracheo-bronchitis.

(29) (D) Spasmodic croup.

- Spasmodic croup: recurrent sudden upper airway obstruction which presents as stridor and cough. Approximately 50% of children have atopic disease.
- The cause is viral in some cases, but allergic and psychologic factors may be important in others.

(30) (D) Acute bronchiolitis.

- Acute bronchiolitis: the infant first develops a mild upper respiratory tract infection with sneezing and clear rhinorrhea.
- This may be accompanied by diminished appetite and fever of 38.5-39°C, respiratory distress ensues, with paroxysmal wheezy cough, dyspnea and irritability.
- Breathing may be markedly increased with nasal flaring and retractions.

(31) (A) Post nasal drip.

Post-nasal drip occurs when excessive mucus is produced by the nasal mucosa.

- The excess mucus accumulates in the throat or at back of the nose.
- It is caused by rhinitis, sinusitis, gastroesophageal reflux disease, or by a disorder of swallowing (such as an esophageal motility disorder).

It is frequently caused by an allergy, which may be seasonal or persistent throughout the year.

It has been known to be worse upon waking in the morning as gravity causes the mucous to drain down into the throat and lower respiratory passages while the patient is lying asleep.

(32) (B) Viral upper respiratory tract infection.

Most episodes of acute pharyngotonsillitis are caused by viruses

(33) (A) Oxygen.

- Infants with acute bronchiolitis who are experiencing respiratory distress should be hospitalized; the mainstay of treatment is supportive
- If hypoxemic, the child should receive cool humidified oxygen. Sedatives are to be avoided because they may depress respiratory drive

(34) (A) Corticosteroids inhaler.

This is a step 3 moderate persistent bronchial asthma

If the treatment is a medium dose inhaled steroids or low dose steroids with either leukotriene inhibitors or long acting bronchodilators or long acting theophylline with quick relief medication.

(35) (D) Endoscopic removal.

Endoscopic removal is accomplished with an endoscope under the following conditions; rays show the polyp located in the esophagus (food pipe); the person develops symptoms such as abdominal pain or vomiting blood. Minor changes in stool color or minor vomiting are not indications for removal

3. If the battery is 6 or bigger) and the oil is younger than 6 year-old and the battery does not pass through the stoich test 48 hours.

(36) (A) Streptococcus pneumonia (pneumococcus).

- **Streptococcus pneumoniae colonizes the upper respiratory tract of healthy individuals and is one of the most frequent causes of bacterial infection in children**

Note that cefotaxime is used for a variety of infections including lower respiratory tract infections, e.g. pneumonia (most commonly caused by *Streptococcus pneumoniae*).

(37) (C) Growth retardation.

- **Infants who have been treated with dexamethasone have an increased risk of neurodevelopmental delay and cerebra palsy.**

(38) (A) Pertussis.

Classical , pertussis a pro o disease, dK ded into atarrhal, paroxysm and onvaescent stages

- The catarrhal stage (1-2 weeks) begins insidiously after an incubation period ranging from 3-12 days with no distinctive symptoms of congestion and rhinorrhea variably accompanied by low grade fever, sneezing, lacrimal r and conjunctival suffusion.

- **As initial symptoms faded, coughing marks the onset of the paroxysmal stage (2-6 weeks).**

- The cough begins as a dry, intermittent, irritative hack and evolves it to the inexorable paroxysms that

le ha mark o pertussi ■

(39) (B) Respiratory syncytial virus.

Respiratory syncytial virus is the leading cause of lower respiratory tract infections in infants and young children.

I s suspected p tie ; with compatible clinic; lower respiratory tract disease enter s so , kno

- Identification of typical plaque morphology with syncytium formation and immunofluorescent staining

n r the diagnosis

(40) (A) Croup.

- Most patients have an upper respiratory tract infection with some combination of rhinorrhea, pharyngitis, mild cough and a low grade fever for 1-3 days before the signs and symptoms of upper airway obstruction become apparent

- he mild the develops the characteristic barking cough hoarseness and inspiratory stridor.

-The low grade fever may persist although temperatures may reach 39-40°C but some children remain afebrile

(41) (A) Insufficient surfactant.

- This is a case of respiratory distress syndrome (lack of surfactant)

- Signs of respiratory distress syndrome usually appear within minutes of birth although they may not be recognized for several hours in larger premature infants until rapid, shallow respirations have increased

t 60/min or greater.

- Characteristically, tachypnea, prominent (often audible) grunting, intercostal and subcostal retractions, nasal flaring and dusky skin are noted.

(42) (C) Acute epiglottitis.

- Acute epiglottitis commonly affects children and it is associated with fever, dysphagia, drooling, hoarseness of voice and typically stridor.
- Stridor is a sign of upper airways obstruction and is a surgical emergency.
- The child often appears acutely ill, anxious and has very quiet shallow breathing with the head held forward, insisting on sitting up in bed.
- The early symptoms are insidious but rapidly progressive and swelling of the throat may lead to cyanosis and asphyxiation.

(43) (D) Midgut volvulus.

- Midgut volvulus occurs in patients (usually in infants) who are predisposed because of congenital intestinal malrotation during fetal development.

In neonates, malrotation with midgut volvulus classically presents with bilious vomiting and high intestinal obstruction.

- While most neonates with bilious vomiting do not have midgut volvulus, this diagnosis must be ruled out.

(44) (D) Three doses hepatitis B virus vaccine.

- Infant of mother hepatitis B virus positive must receive immunoglobulin within first 12 hour and vaccination at 0,1 and 6 months.

For this child it is too late for immunoglobulin, so only give vaccination.

(45) (A) Double bubble in abdominal x-ray.

- When duodenal atresia is suspected, erect and recumbent plain radiography of the abdomen should be the first imaging obtained.
- A characteristic finding of duodenal obstruction is the double-bubble image of an air-filled stomach proximal to an air-filled first portion of the duodenum.

Absence of gas in the remaining small and large bowel suggests atresia, whereas scattered amounts ' gas distal to the obstruction suggests stenosis or malrotation/volvulus.

(46) (B) 10 days.

Oral penicillin V is used for treatment of group A beta-hemolytic streptococcal.

- Treatment with oral penicillin V for 10 days is recommended but it must be taken for a full 10 days even though there is symptomatic improvement within 3-4 days.

(47) (B) IV fluid.

This resuscitation phase requires rapid restoration of the circulating intravascular volume and treatment of shock with an isotonic solution, such as normal saline or ringer lactate.

(48) (D) Start with 50 ml/kg for 4 hours then 100 ml/kg/day.

- Oral rehydration salts is a solution made of water and electrolytes mixture.

Glucose is added in amounts of (2%) because it is linked to sodium absorption.

- In mild diarrhea, 50 ml/kg over 4hrs is used for deficit therapy then 100 ml/kg within a day is used for maintenance therapy.

(49) (D) Oral rehydration salts.

- Indication of oral rehydration salts: mild to moderate diarrhea.
- Consisting of liquid solutions delivered orally, designed to counteract dehydration.

(50) (B) Clostridium difficile.

- Clostridium difficile signs and symptoms: significant diarrhea (new onset of more than three partially formed or watery stools per 24 hour period), recent antibiotic exposure, abdominal pain, fever (up to 40.5°C) and a distinctive foul stool odor.

(51) (D) Pyloric stenosis.

- Non-bilious vomiting is the initial symptom of pyloric stenosis.
- The vomiting may or may not be projectile initially, but is usually progressive, occurring immediately after a feeding.
- Emesis may follow each feeding, or it may be intermittent.
- The vomiting usually starts after 3-week-old, but symptoms may develop as early as the first week of life and as late as the 5th month.
- Meconium ileus: not passing early meconium and stool.
- Hirschsprung disease: not passing early meconium and stool.

(52) (B) 10%.

- This is a case of gastroenteritis with mild dehydration.
- Moderate dehydration occurs 5-10% in an infant; 3-6% in an older child or adult.
- Presentation; tachycardia, little or no urine output, irritable, lethargic, sunken eyes and fontanel, decreased tears, dry mucous membranes, mild delay in elasticity (skin turgor), delayed capillary refill (>1.5 second), cool and pale.

(53) (B) X-ray of abdomen.

- Abdominal radiographs may show evidence of upper gastrointestinal tract obstruction with dilatation of the stomach or small bowel to a point of obstruction.
- Radiographs that show bowel obstruction may direct the subsequent imaging workup.
- Findings of a distal obstruction can be clarified with contrast enema.

(54) (C) Angiogram.

- A test with poor sensitivity/specificity that may detect the source of bleeding is the tagged RBCs scan.
- This is especially used for slow bleeding (<0.5 ml/min).
- However, for rapid bleeding (>0.5 ml/min), mesenteric angiogram ± embolization is the gold standard.
- Colonoscopy is often first line of investigation.

(55) (B) Surgical referral.

This is a case of pyloric stenosis.

Diagnosis is via a careful history and physical examination, often supplemented by radiographic studies. There should be suspicion for pyloric stenosis in any young infant with severe vomiting.

On examination, palpation of the abdomen may reveal a mass in the epigastrium.

- This mass, which consists of the enlarged pylorus, is referred to as the (olive) and is sometimes evident after the infant is given formula to drink.
- It is an elusive diagnostic skill requiring much patience and experience.

There are often palpable (or even visible) peristaltic waves due to the stomach trying to force its contents past the narrowed pyloric outlet.

Infantile pyloric stenosis is typically managed with surgery; very few cases are mild enough to be treated medically.

(56) (A) Henoch-Schonlein purpura.

- Henoch-Schonlein purpura is a small-vessel vasculitis characterized by purpura especially in lower limb and buttock, arthritis, abdominal pain and hematuria.

(57) (B) Idiopathic thrombocytopenic purpura.

The classic presentation of idiopathic thrombocytopenic purpura is that of a previously healthy 1-4-year-old child who has sudden onset of generalized petechiae and purpura.

The parents often state that the child was fine yesterday and now is covered with bruises and purple dots. Often there is bleeding from the gums and mucous membranes, particularly with profound thrombocytopenia.

- There is a history of a preceding viral infection 1-4 weeks before the onset of thrombocytopenia.

(58) (D) Hemoglobin electrophoresis.

- Hemoglobin electrophoresis usually reveals an elevated hemoglobin F fraction, which is distributed heterogeneously in the RBCs of patients with beta-thalassemia, hemoglobin H in patients with hemoglobin H disease and Hemoglobin Bart in newborns with alpha-thalassemia trait.

In beta-0 thalassemia, no hemoglobin A is usually present; only hemoglobin A2 and hemoglobin F are found.

(59) (C) Desmopressin.

- Desmopressin administered by IV injection or, more commonly, through a nasal spray called Stimate
- It is a synthetic hormone, similar to the natural hormone vasopressin that controls bleeding by stimulating the body to release more Von Willebrand factor already stored in the lining of blood vessels thereby enhancing factor VIII levels.
- Desmopressin is usually effective in people with type 1 and some subtypes of type 2 disease.

(60) (C) Pneumococcal vaccine.

- Routine immunizations and also yearly influenza vaccination.

Pneumococcal vaccine at 2-year-old and meningococcal vaccine should be given.

(61) (B) Iron deficiency anemia.

blood smear on deficiency anemia hypochromic microcytic red cells, commonly RBCs indices:

.. MCV = less than 80 fl.

MCH = less than 27 pg.

3- MCV = less than 80 fl.

(62) (D) DIC.

- Blood components are used for replacement therapy in patients with hemorrhage.
- This may consist of platelet infusions (for thrombocytopenia), cryoprecipitate (for hypofibrinogenemia) and/or fresh, frozen plasma for replacement of coagulation factors and natural inhibitors).
- The role of heparin in DIC is limited to patients who have vascular thrombosis in association with DIC.

(63) (C) Prescribe treatment if iron deficiency anemia is confirmed.

- Iron deficiency anemia must be differentiated from hemochromatosis and hemoglobinopathies like alpha-thalassemia and beta-thalassemia trait and other hemoglobinopathies, particularly those related to hemoglobin E.
- Another difference between alpha- and beta-thalassemia trait and iron deficiency is that the red cell distribution width is elevated in iron deficiency.

(64) (B) Give iron and multivitamin.

Iron deficiency anemia may present with guaiac-positive stools and/or pica and is often due to excessive whole cow milk intake.

- Treatment is by iron supplementation, preferably with multivitamins.
- Iron levels return to normal after supplementation (usually about 6 months), maintenance iron with multivitamin with iron or dietary changes are advised.

(65) (D) Hydroxyurea and recombinant erythropoietin.

- Combination therapy with hydroxyurea and recombinant erythropoietin rather than treatment with hydroxyurea alone have been shown to further elevate hemoglobin F levels and to promote the development of hemoglobin F containing red cells. Folic acid is vitamin B9.

(66) (B) Factor 8 deficiency.

- Even in patients with severe hemophilia, only 90% have evidence of increased bleeding by first year of life.
- Although bleeding may occur in any area of the body, the hallmark of hemophilia is hemarthrosis or bleeding into the joints which may be induced by minor trauma; however, many hemarthroses are spontaneous.

(67) (D) Henoch-Schönlein purpura.

Henoch-Schönlein purpura is an acute IgA mediated leukocytoclastic vasculitis that primarily affects children.

- The dominant clinical features of Henoch-Schönlein purpura include cutaneous purpura, arthritis, abdominal pain, gastrointestinal bleeding, orchitis and nephritis.

(68) (A) Migraine.

The migraine which is not associated with an aura is the most prevalent type of migraine in children. The headache is throbbing or pounding and tends to be unilateral at onset or throughout its duration but may also be located in the bifrontal or temporal regions.

The headache usually persists for 1-3 hours, although the pain may last for as long as 72 hours. Additional symptoms include extreme paleness, photophobia, light headedness, phonophobia, osmophobia (aversion to odors) and paresthesia of the hands and feet.

(69) (B) Ascending paralysis start from the lower limbs.

Weakness begins usually in the lower extremities and progressively involves the trunk, the upper limbs and finally the bulbar muscles, a pattern known as Landry's ascending paralysis.

(70) (D) Full history and examination.

- A thorough history and physical examination suffice to establish the diagnosis in most cases.

(71) (D) Lymphocytosis.

- CSF lymphocytosis indicates aseptic, tuberculous, or fungal meningitis.

(72) (C) Penicillin (ampidllin).

Empirical selection till the results of culture and sensitivity tests.

Ampicillin, third generation cephalosporines and with or without vancomycin.

(73) (D) CSF analysis.

- Examination of the CSF is essential in confirming the diagnosis of meningitis, encephalitis and subarachnoid hemorrhage.

(74) (B) Acute cerebellar ataxia.

- Acute cerebellar ataxia occurs primarily in children 1-3-year-old and is a diagnosis by exclusion.
- The condition often follows a viral illness, such as varicella, coxsackie virus, or echo virus infection by 2-3 weeks and is thought to represent an autoimmune response to the viral agent affecting the cerebellum.
- The onset is sudden and the truncal ataxia can be so severe that the child is unable to stand or sit.
- Vomiting may occur initially, but fever and nuchal rigidity are absent.

(75) (A) Vomiting.

- The full sequence is: decreased level of consciousness, confusion, headache, projectile vomiting, unequal pupils (anisocoria) and the presence of a pronator drift or motor weakness.

(76) (A) Meningitis.

- This is a case of mumps.
- Swelling of the face anterior to the both ears indicate parotid glands enlargement.
- The most common complications of mumps are meningitis, with or without encephalitis and gonadal involvement.
- Uncommon complications include conjunctivitis, optic neuritis, pneumonia, nephritis, pancreatitis and thrombocytopenia.

(77) (A) Penicillin.

- This is case of meningococcal meningitis.
- Patients with meningitis presents with fever, malaise, headache, neck stiffness, photophobia, altered mental status, nausea, vomiting, seizures, or signs of meningeal irritation (Kernig's and Brudzinski's signs).
- Meningitis caused by the bacteria *Neisseria meningitidis* (known as meningococcal meningitis) can be differentiated from meningitis with other causes by a rapidly spreading petechial rash, which may precede other symptoms.
- The rash consists of numerous small, irregular purple or red spots (petechiae) on the trunk, human leg, mucous membranes, conjunctiva and occasionally the palms of the hands or soles of the feet.
- The rash is typically non-blanching; the redness does not disappear when pressed with a finger or a glass tumbler.
- Although this rash is not necessarily present in meningococcal meningitis, it is relatively specific for the disease; it does, however, occasionally occur in meningitis due to other bacteria.
- Once an accurate diagnosis of meningococcal meningitis is established, appropriate changes can be made.
- Currently, penicillin is the drug of choice for the treatment of meningococcal meningitis and septicemia.
- Ampicillin is also an option.
- Therapy should be changed to ceftriaxone or cefotaxime if the isolate is resistant to penicillin.

(78) (C) Vitamin K.

- IM administration of 1 mg of vitamin K at the time of birth prevents the decrease in vitamin K dependent factors in full term infants, but it is not uniformly effective in the prophylaxis of hemorrhagic disease of the newborn in premature infants.

(79) (C) Congenital heart disease.

- Congenital heart disease is the most common birth defects that leading cause of infant death related to birth defects.

(80) (B) Retinoplastoma.

- Retinoblastoma classically presents with leukocoria, a white pupillary reflex which often is first noticed when a red reflex is not present at routine newborn or well child examination or in a flash photograph of the child.
- Strabismus often is the initial presenting complaint.
- Orbital inflammation, hyphema, or pupil irregularity occurs with advancing disease.
- Pain usually is a feature if secondary glaucoma is present.

(81) (D) Ventilation.

- The 1 minute Apgar score may signal the need for immediate resuscitation and the 5,10,15 and 20 minutes scores may indicate the probability of successfully resuscitating an infant.

(82) (D) Erythema toxicum neonatorum.

- Erythema toxicum neonatorum is characterized by blotchy red spots on the skin with overlying white or yellow papules or pustules.
- These lesions may be few or numerous.

(83) (D) Congenital cytomegalovirus infection.

Cytomegalovirus characteristic signs and symptoms of clinically manifested infections include intrauterine growth restriction, prematurity, hepatosplenomegaly and jaundice, blueberry muffin like rash, thrombocytopenia and purpura and microcephaly and intracranial calcifications.

(84) (A) As soon as possible.

- Feedings should be initiated as soon after birth as possible, depending on the infant's ability to tolerate enteral nutrition.

It helps maintain normal metabolism during the transition from fetal to extra uterine life and also promotes bonding between the mother and infant, most infants can start breast feeding immediately after birth, almost always within 1-4 hours.

(85) (A) Breastfeed jaundice.

Pathological jaundice: conjugated (direct) bilirubin, start in first 24 hours, bilirubine >15 mg/dl, persistent 1 week in term infant and 2 weeks in preterm infant.

- Physiological jaundice, unconjugated (indirect) bilirubine, start in 2-3 days, bilirubine <15 mg/dl, persistent 1 week in term infant and 2 weeks in preterm infant.

Breastfeeding jaundice: unconjugated (indirect) bilirubine, start in 7 days of life, persistent to one or more months

(86) (A) Cephalosporin IV.

This is a case of gonorrheal conjunctivitis.

The treatment is systemic ceftriaxone and topical saline irrigation.

Ceftriaxone is a third generation cephalosporin antibiotic.

(87) (C) Heart rate significant.

The five criteria are summarized in word (Apgar), (appearance, pulse, grimace, activity and Respiration).

(88) (A) Oral nystatin.

This is a case of candidiasis.

The use of antibiotics, especially in the first year of life, may lead to recurrent or persistent oral thrush or oral pseudomembranous candidiasis.

Treatment of mild cases may not be necessary.

When treatment is warranted the most commonly prescribed antifungal agent is nystatin.

(89) (A) Give milk orally.

For infants under 1,000 gram, the initial feedings are either half or full strength breast milk or preterm formula at 10 ml/kg/24 hours as a continuous nasogastric tube drip (or given by intermittent gavage every 2-3 hours).

(90) (A) Wash hands before and in between examination of patients.

Hand washing is probably the most important method of preventing the spread of infection.

(91) (C) Refer to surgery.

- **Non-bilious vomiting is the initial symptom of pyloric stenosis.**
- **The vomiting may or may not be projectile initially but is usually progressive, occurring immediately after a feeding.**

(92) (A) Cavernous hemangioma.

- **Superficial hemangiomas are bright red, protuberant, compressible, sharply demarcated lesions that may occur on any area of the body.**
- **Although sometimes present at birth, they more often appear in the first 2 months and are heralded by an erythematous or blue mark or an area of pallor, which subsequently develops a fine telangiectatic pattern before the phase of expansion.**

(93) (A) 12-month-old.

- **At 1-year-old:**
- **Motor: walk with one hand held; rises independently, takes several steps.**
- **Adaptive: picks up pellet with unassisted pincer movement of forefinger and thumb; releases object to other person on request or gesture.**
- **Language: says a few words besides mama, dada.**
- **Social: plays simple ball game; makes postural adjustment to dressing.**

(94) (B) Psychosocial.

- **In developed countries, psychosocial failure to thrive is far more common than organic failure to thrive.**

(95) (C) 13-month-old.

- **Most babies take their first steps sometime between 9-12-month-old and are walking well by the time they are 14 or 15-month-old.**

(96) (B) 10-month-old.

- **At 10-month-old:**
- **Sitting: sits up alone and indefinitely without support, with back straight.**
- **Standing: pulls to standing position; walks holding on to furniture.**
- **Adaptive: grasps objects with thumb and forefinger; pokes at things with forefinger; picks up pellet with assisted pincer movement; uncovers hidden toy; attempts to retrieve dropped object; releases object grasped by other person.**

(97) (B) Developmental assessment.

- **Developmental assessment is the process of mapping a child's performance compared with children of similar age.**
- **The comparison group is obtained from a representative sample of the population that the child comes from.**
- **Several factors contribute to performance varying greatly between different population groups.**
- **Parents and caregivers are usually more aware of norms for gross motor milestones, such as walking independently, patterns of normal speech, language acquisition and play skills; consider targeted questioning.**
- **Consider use of developmental screening questionnaires and measurement tools to supplement clinical judgment.**

(98) (A) Sits without support.

- Baby may be starting to sit up alone by 6 months.
- To get ready, babies first prop themselves up with their hands, but over time they can start to let go and sit unsupported.

(99) (C) 36-month-old.

- The child at 2.5-3-year-old can stand on one foot for 3 seconds, begins to hop on one foot, correctly names some colors, speaks in sentences of 5-6 words, a self-concept and self-esteem start to develop, says first name, age and sex, cooperation and instrumental aggression appear and understands causes, effects and expressions of basic emotions.

(100) (A) Draw square and triangle.

- If he can copy circle; he is 3-year-old, but if can also copy square; he is 4-year-old.
- A 4-year-old: sings a song, skips and hops on one foot, catches and throws a ball overhand, walks downstairs alone, draws a person with three separate body parts, builds a block tower with 10 blocks, understands the difference between fantasy and reality.

(101) (A) DPT is not contraindicated during pregnancy.

- Recommending use of tetanus and diphtheria vaccine in pregnancy for those women at risk or in whom no booster has been given within the last 10 years.
- The actual diseases of tetanus and diphtheria produce severe morbidity and mortality and a newborn tetanus mortality rate of 60%.

(102) (A) Hepatitis B virus + Polio + DPT + Hib.

- Delayed immunization for children from 14-month-old to 7-year-old:
 - 1- The first visit: DPT + Polio + Hib + hepatitis B virus + Tuberculin test.
 - 2- One month later: MMR + hepatitis B virus.
 - 3- Another one month later: DPT + Polio + Hib.
 - 4- Another 2 months later: DPT + Polio + Hib + hepatitis B virus.
 - 5- After one year: booster dose of Polio + DPT (if less than 5-year-old).
 - 6- MMR should be given with varicella zoster virus.

(103) (B) Egg.

- Flu vaccine is against seasonal influenza cause by viruses.
- Anaphylactic hypersensitivity to vaccine constituents is also a contraindication.
- However, if a vaccine is essential, there are desensitizing protocols for some vaccines.
- The major constituents of concern are egg proteins for vaccines grown in eggs, gelatin, a stabilizer in many vaccines and antimicrobial agents.

(104) (C) 23-valent pneumococcal vaccine is given to 2-year-old children or older.

- A 23-valent polysaccharide pneumococcal vaccine the available; pneumococcal polysaccharide vaccine had an overall efficacy of 57%, was not effective in children younger than 2-year-old and therefore was only indicated for certain high-risk children of 2-year-old or older.
- A 7-valent protein-conjugated polysaccharide pneumococcal vaccine is given at 2, 4, 6 and 12-15 months.

(105) (A) Between 2-8°C.

- The vaccines must be kept in the cold chain between 2-8°C at all times.

(106) (B) 2 doses in 6 week apart.

- Given primarily at 1-year-old and then at 4-6-year-old.
- For 1-year-old and above, 2 doses are given at least 4-8 weeks apart.

(107) (D) Hepatitis B vaccine.

- It is recombinant hepatitis B vaccine prepared by genetic engineering.

(108) (A) The interval between administration of varicella vaccine and MMR must be greater than 28 days.

- Varicella may be given simultaneously with MMR, but at separate sites.
- If not given simultaneously, the interval between administration of varicella vaccine and MMR must be greater than 28 days.

(109) (A) Infectious mononucleosis.

- The onset of illness is usually insidious and vague.
- Patients may complain of malaise, fatigue, acute or prolonged fever (more than one week), headache, sore throat, nausea, abdominal pain and myalgia.
- The diagnosis is usually confirmed by serologic testing, either for heterophile antibody or specific Epstein Barr virus antibodies.

(110) (A) Streptococcus.

- Streptococcus pyogenes and Staphylococcus aureus are the most common etiologic agents.

(111) (B) Fungal infection.

- Examination with a wood lamp discloses a yellowish gold fluorescence in fungal infection.

(112) (A) Brain edema.

- Overly rapid treatment of hypernatremic dehydration may cause significant morbidity and mortality.
- With overly rapid lowering of the extracellular osmolality during the correction of hypernatremia, there may be an osmotic gradient created that causes water movement from the extracellular space into the cells of the brain, producing cerebral edema.

(113) (A) Enuresis.

- The child should avoid drinking and void before sleeping are important in management of enuresis.

(114) (A) Decreased incidence of Streptococcus glomerulonephritis.

- The patient, usually a child, suffers a streptococcal infection 1-3 weeks before the onset of the acute nephritic syndrome.
- Streptococcal throat infection, otitis media or cellulitis can all be responsible.
- Therefore, treatment of Streptococcus pharyngitis will decrease incidence of streptococcus glomerulonephritis.
- Although skin and throat infections are common in children, post-Streptococcal glomerulonephritis is a rare complication of these infections.

(115) (A) Hospitalization and call social worker.

Social worker is needed because we should keep child abuse in mind.

(116) (A) Elevation of the leg and cold compression.

Children are more likely to get thigh pain after a day full of activities like, jumping, running and mbing.

- his type of pain is quite common and not associated with any major medical condition.

If the cause is not a serious one, the pain will disappear on itself.

ntil this happens, hot compresses and resting are an excellent cure.

More serious cases, however, require immediate medical intervention.

(117) (B) Epstein Barr virus serology.

1₁ Epstein Barr virus, the physical examination is characterized by generalized lymphadenopathy < 90% of cases), splenomegaly (50% of cases) and hepatomegaly (10% of cases).

Symptomatic hepatitis or jaundice is uncommon, but elevated liver enzymes are common,

splenomegaly to 2-3 cm below the costal margin is typical; massive enlargement is uncommon.

The sore throat is often accompanied by moderate to severe pharyngitis with marked tonsillar enlargement, occasionally with exudates.

(118) (A) Acetaminophen and throat swab.

Symptomatic therapy can be an important part of the overall treatment plan.

An oral antipyretic/analgesic agent (acetaminophen or ibuprofen) may relieve fever and sore throat pain.

- Gargling with warm salt water is often comforting.

(119) (A) Mumps.

Swelling of the face anterior to the both ears indicates parotid gland enlargement.

The typical case presents with an early symptom lasting 1-2 days consisting of fever, headache, omiting and achiness.

Parotitis then appears and may be unilateral initially but becomes bilateral in about 70% of cases.

(120) (B) Give 65 ml/hour.

Infants and children: (4-2-1 rule):

Give 4 ml/kg/hour for the first 10 kg of body weight.

Give 2 ml/kg/hour for the second 10 kg body weight.

1 ml/kg/hour for subsequent kg body weight.

$4 \times 10 + (2 \times 10) + (1 \times 2) = 62 \text{ ml/hour.}$

O r another formula:

ror the first 10 kg of weight, a child needs 100 ml/kg of weight.

For the next 10 kg of weight (11-20 kg), a child only needs 50 ml/kg of weight or anything over 20 kg (21 kg of weight and higher), the child only needs 20 ml/kg of weight.

$10 \times 100 + (10 \times 50) + (2 \times 20) = 1540 \text{ ml/24 hours} = 64.16 \text{ ml/hour.}$

(121) (A) Reassure.

ood refusal refers to behaviors that interfere with proper nutritional, caloric and/or hydrational needs.

- These behaviors include (but are not limited to) throwing food or utensils, holding food in the mouth, hitting the spoon when fed, spitting out food, kicking at meal times, crying and vomiting.
- Some children without reflux or prior medical history can use a finger or other means to gag and vomit food.
- Behavior analysis is the most effective approach to food refusal.
- The goal of using behavior analysis is to identify problematic behaviors during mealtimes and then to teach an appropriate set of behaviors that will yield a proper mealtime experience.

(122) (C) CT of brain.

- Head CT scan without contrast has become standard for head trauma.

(123) (A) Behavioral therapy.

- Treatment for pica may vary by patient and suspected cause (e.g. child, developmentally disabled, pregnant or psychotic) and may emphasize psychosocial, environmental and family-guidance approaches.
- Iron deficiency which may be treatable through iron supplement through dietary changes.
- Some children require behavioral intervention and families may need to work with a psychologist or other mental health professional.
- Medication may also be prescribed if pica is associated with significant behavioral problems not responding to behavioral treatments.

(124) (C) Mongolian spot.

- Slate-blue, well-demarcated areas of pigmentation are seen over the buttocks, back and sometimes other parts of the body in more than 50% of black, native American, or Asian infants and occasionally in white ones.
- These patches have no known anthropologic significance despite their name, mongolian spots; they tend to disappear within the first year of life.

(125) (B) Antipyretic and IV fluid.

- This is a case of infectious mononucleosis.
- Rest and symptomatic treatments are the mainstays of management.
- Bed rest is necessary only when the patient has debilitating fatigue.

(126) (D) Multi factorial intervention with family.

- Recommendations for management of obese child include:
 - 1- Universal measurement of BMI and plotting of results on a BMI chart to track changes over time.
 - 2- Routine assessment for obesity-related risk factors, to allow for early intervention.
 - 3- Routine brief clinical interventions by the primary care provider include: messages of obesity-focused education, family-centered communication and interventions, rather than those focused on the child alone and emphasis on long-term changes in behaviors that are related to obesity risk, rather than relying on diets and exercise prescriptions, which tend to set short-term goals.
- Note that there are no medications currently approved for the treatment of obesity in children.

(127) (A) Acute lymphoblastic leukemia.

- Acute lymphoblastic leukemia is the most common childhood tumor in general.
- Rhabdomyosarcoma is the most common soft tissue tumor.
- Wilms tumor is the most common intra-abdominal childhood tumor

(128) (A) Measles.

- Measles: due to conjunctivitis which is not present in rubella.
- 3 C (Cough + Coryza + Conjunctivitis) = Measles.

(129) (B) Antihistamine drugs.

- 18 hours is a long duration so it is unlikely to be anaphylactic shock and more likely a regular reaction to bee stings so antihistaminic drug is the best treatment.

(130) (B) Adrenaline.

- Asystole is treated by CPR combined with an IV vasopressor such as epinephrine (adrenaline).

(131) (D) Erysipelas.

- Erysipelas is a bacterial skin infection involving the upper dermis that characteristically extends into the superficial cutaneous lymphatics.
- Patients often cannot recall an inciting event, but a history of recent trauma or pharyngitis may be elicited.
- Prodromal symptoms, such as malaise, chills and high fever, often begin before the onset of the skin lesions and are usually present within 48 hours of cutaneous involvement.
- Pruritus, burning and tenderness are typical complaints.
- It begins as a small erythematous patch that progress to a fiery-red, indurated, tense and shiny plaque.

(132) (A) Wilms tumor.

- The most common intra-abdominal tumor in children are neuroblastoma and wilms tumor.

(133) (D) Alkaline Phosphatase.

- This is a case of Rickets.
- Rickets is a disease of growing bone that is unique to children and adolescents.
It is caused by a failure of osteoid to calcify in a growing person.
- High alkaline phosphatase may represent a high bone turnover state.
- Alkaline phosphatase participates in the mineralization of bone and growth plate cartilage and is an excellent marker of disease activity.
- in the heritable forms of phosphopenic rickets, the serum alkaline phosphatase activity tends to be moderately elevated (400-800 IU/L) whereas in calcipenic rickets, values often reach greater levels often up to 2,000 IU/L).

(134) (A) Renal function test.

- This is a case of acute nephritic syndrome.
 - history suggestive of preceding streptococcal infection may include a preceding infective episode such as pharyngitis, tonsillitis, or pyoderma.
- Dark urine is often the first clinical symptom.
- The onset of puffiness of the face or eyelids is sudden.
- It is usually prominent upon awakening and, if the patient is active, tends to subside at the end of h day.
- It reveals hematuria (some of the red cells are typically dysmorphic) with or without RBCs casts, varying degrees of proteinuria and often pyuria.

- Nephrotic range proteinuria is uncommon and occurs in about 5% of cases at presentation.
- Blood tests and urine analysis will be required to obtain a diagnosis of acute nephritic syndrome.
- Urinalysis should be performed on a freshly voided specimen. This may require the collection of urine over a 24 hours period to assess the amount of protein lost over this time period.
- Urinalysis is always abnormal.
- The function of the kidneys will also be tested using a simple blood test to detect signs of renal failure and treat these accordingly.

(135) (C) Milk bottle decay.

- Tooth decay in infants and very young children is often referred to as baby bottle tooth decay.
- Baby bottle tooth decay happens when sweetened liquids or those with natural sugars (like milk, formula and fruit juice) cling to an infant's teeth for a long time.
- Bacteria in the mouth thrive on this sugar and make acids that attack the teeth.

(136) (C) Type 3.

- Bite will be 2 types of hypersensitivity:
 - 1- Immediate (anaphylaxis) within minutes to hours - type 1.
 - 2- Late (immune complex mediated) - type 3.

(137) (C) A known precipitant cause of generalized convulsion.

- Breath holding spells peak at 2-year-old.
- It does not cause epilepsy but may precipitate convulsion and diazepam has no role in treatment.

(138) (B) Kwashiorkor.

- Kwashiorkor characterized by edema, irritability, anorexia, ulcerating dermatoses and an enlarged liver with fatty infiltrates.
- Sufficient calorie intake, but with insufficient protein consumption, distinguishes it from marasmus.
- Kwashiorkor cases occur in areas of famine or poor food supply.
- Breast milk contains proteins and amino acids vital to a child's growth.
- In at-risk populations, kwashiorkor may develop after a mother weans her child from breast milk, replacing it with a diet high in carbohydrates, especially starches, but deficient in protein.

(139) (A) Personal contact.

- The most important factor that determines spread of scabies is the extent and duration of physical contact with an affected individual.
- The children and sexual partners of an affected individual are most at risk.

(140) (D) Dry Beriberi.

- Beriberi is a disease due to vitamin B1 (thiamine) deficiency.
- There are 2 major types of Beriberi:
 - 1 - Wet Beriberi affects the cardiovascular system.
 - 2 - Dry Beriberi and Wemicke-Korsakoff syndrome affect the nervous system.

(141) (A) Wet Beriberi.

- Wet Beriberi affects the cardiovascular system due to vitamin B1 (thiamine) deficiency.

(142) (C) Atropine.

This is a case of organophosphate poisoning.

- It results from exposure to organophosphates, which cause the inhibition of acetylcholinesterase leading to the accumulation of acetylcholine in the body.

Organophosphate poisoning most commonly results from exposure to insecticides or nerve agents.

Use of atropine may eliminate the need for intubation.

(143) (D) Trisomy 21.

Down syndrome features include hypotonia, flat face, upward and slanted palpebral fissures and epicanthic folds, speckled irises (brushfield spots), varying degrees of mental and growth retardation, dysplasia of the pelvis, cardiac malformations and simian crease, short broad hands, hypoplasia of middle phalanx of 5th finger, duodenal atresia and high arched palate.

- 5% of patients with Down syndrome have a translocation t(14q21q), t(15q21q) and t(13q21q) in which the phenotype is the same as trisomy 21 Down syndrome.

(144) (A) Vitamin B1.

Vitamin B1 (thiamine) deficiency causes Beriberi, Vitamin B2 (riboflavin) deficiency causes ariboflavinosis.

Vitamin B3 (niacin) deficiency causes pellagra.

Vitamin B12 (cobalamin) deficiency causes pernicious

anemia, Vitamin C (ascorbic acid) deficiency causes scurvy.

(145) (B) Rheumatic fever.

Rheumatic fever is an autoimmune disease that may occur after a group A streptococcal throat infection causes inflammatory lesions in connective tissue, especially that of the heart, joints, blood vessels and subcutaneous tissue.

(146) (A) Chickenpox.

Chickenpox is a highly infectious disease caused by primary infection with varicella zoster virus, usually starts with vesicular skin rash mainly on the body and head rather than at the periphery and becomes itchy, raw pockmarks, which mostly heal without scarring.

On examination the observer typically finds skin lesions at various stages of healing and also ulcers in oral cavity and tonsil areas.

(147) (A) Hodgkin's lymphoma.

The most common symptom of Hodgkin's lymphoma is the painless enlargement of one or more lymph nodes, or lymphadenopathy.

The nodes may also feel rubbery and swollen when examined, the nodes of the neck and shoulders (cervical and supraclavicular) are most frequently involved -90% of the time, on average).

The lymph nodes of the chest are often affected and these may be noticed on a chest radiograph, when Hodgkin's cells are examined microscopically, multinucleated Reed-Sternberg cells are the characteristic histopathologic finding.

(148) (A) Establish airway.

- Patients suspected of ingesting a caustic substance should be triaged to a high priority for prompt evaluation and treatment.

- This includes prompt evaluation of airway and vital signs as well as immediate cardiac monitoring and IV access.
- Because of the risk of rapidly developing airway edema, immediate assessment of the patient's airway and mental status should be performed and continually monitored.
- Equipment for endotracheal intubation and cricothyrotomy should be readily available.
- Gentle orotracheal intubation or fiberoptic-assisted intubation is preferred.
- Blind nasotracheal intubation should be avoided due to the increased risk of soft-tissue perforation.

(149) (D) Marasmus.

- Marasmus is a form of severe malnutrition characterized by energy deficiency.

(150) (B) N-acetylcysteine.

- N-acetylcysteine is nearly 100% hepatoprotective when given within 8 hours after an acute acetaminophen ingestion, but can be beneficial in patients who is treated more than 24 hours after ingestion.
- N-acetylcysteine is approved for both oral and IV administration.

(151) (B) Long arm of human chromosome 7.

- Cystic fibrosis transmembrane conductance regulator is a protein that is encoded by the cystic fibrosis transmembrane conductance regulator gene and found on the long arm of human chromosome 7.
- It is found in the epithelial cells of many organs including the lung, liver, pancreas, digestive tract, reproductive tract and skin.
- Normally, the protein moves chloride and thiocyanate ions with a negative charge out of an epithelial cell to the covering mucus.
- Positively charged sodium ions follow these anions out of the cell to maintain electrical balance.
- This increases the total electrolyte concentration in the mucus, results in the movement of water out of a cell by osmosis.
- In sweat glands, cystic fibrosis transmembrane conductance regulator defects result in reduced transport of sodium chloride and sodium thiocyanate in the reabsorptive duct and saltier sweat.
- This was the basis of a clinically important sweat test for cystic fibrosis before genetic screening was available.

(152) (D) Quinine or Quinidine.

- The accidental ingestion of quinine by children causes significant morbidity and mortality.
- Main symptoms of overdose, which can be fatal, include gastro-intestinal effects, oculotoxicity, central nervous system disturbances and cardiotoxicity.
- Visual disturbances including sudden blindness which is usually slowly reversible but there may be residual damage.
- Quinine can produce cardiovascular toxicity similar to that seen with quinidine and those include conduction disturbances, dysrhythmias, anginal symptoms and hypotension leading to cardiac arrest and circulatory failure.

(153) (A) Muscle biopsy.

- **Gowers' sign is a medical sign that indicates weakness of the proximal muscle, namely those of the lower limbs.**
- **The sign describes a patient that has to use his hands and arms to walk up his own body from a squatting position due to lack of hip and thigh muscle strength.**
- **Gowers' sign is classically seen in Duchenne muscle dystrophy, but also presents itself in centronuclear myopathy, myotonic dystrophy and various other conditions associated with proximal muscle weakness.**
- **Muscle biopsy will confirm diagnosis of these cases.**

(154) (A) Febrile convulsion.

- **Current advice is to give regular antipyretic medication (acetaminophen or ibuprofen) during febrile episodes to reduce the child's temperature and therefore lowering the risk of febrile convulsion recurrence.**

(155) (D) Check expiry date of canned food.

- **Botulism is a very serious foodborne illness caused by a deadly bacterium known as Clostridium botulinum.**
- **Most foodborne outbreaks of botulism are caused by home-canned foods.**
- **The most common symptoms of botulism are, abdominal cramps, breathing difficulty that may lead to respiratory failure, difficulty swallowing and speaking, double vision, dry mouth, nausea, vomiting and weakness with paralysis (equal on both sides of the body).**
- **However, if left untreated, botulism is fatal.**

(156) (A) Gastric lavage.

- **Management:**
- **Gastric lavage.**
- **Activated charcoal does not bind to iron.**
- **Symptomatic treatment.**
- **Should be considered for life-threatening ingestion.**
- **Serum iron level should be obtained 2-6 hours after ingestion.**
- **IV deferoxamine, an iron binding ligand and given if:**

- 1- **Serum iron levels > 500 pg/dl, or if > 300 pg/dl and acidosis, hyperglycemia, or leukocytosis are present.**
- 2- **Severe gastrointestinal symptoms are present.**
- 3- **More than 100 mg/kg of iron is ingested.**

(157) (A) Abducting at flexed hip can cause click.

- **Congenital hip dislocation occurs, more commonly in girls than in boys.**
- **The left hip is twice as often involved as the right and bilateral dislocation occurs in more than 25% of affected children.**
- **The criteria for the diagnosis of congenital dislocation of the hip include both physical and radiographic findings.**
- **Certain clinical signs have been identified those are helpful in the evaluation of newborns and infants for possible congenital hip dislocation, which include the following:**

- 1- Limited abduction of the flexed hip, due to shortening and contraction of the hip adductors.
- 2- Increase in depth or asymmetry of the inguinal or thigh skinfolds.
- 3- Shortening of one leg.
- 4- Allis' or Galeazzi's sign: lower position of knee of the affected side when knees and hips are flexed, due to location of femoral head posterior to acetabulum in this position.
- 5- Ortolani's (jerk) sign (clunk of entry or reduction sign).
- 6- Barlow's test (clunk of exit or dislocation sign).
- 7- Telescoping or pistoning action of thighs, due to lack of containment of femoral head with acetabulum.
- 8- Trendelenburg's test: drop of normal hip when child, standing on both feet, elevates unaffected limb and bears weight on affected side, due to weakness of hip abductors.
- 9- Waddling type of gait.
 - The principal treatment for congenital hip dislocation is conservative, especially if diagnosed early.
 - The most common technique is to reduce the dislocation of the femoral head by means of a flexion/abduction maneuver, for a sufficient period of time to permit proper growth of the head and acetabulum, which in turn assures a congruent and stable hip joint.
 - This technique is usually performed on patients in the very early stages of congenital hip dislocation and in infants under 2-year-old; which include splinting.
 - Colonna or Buck's skin traction is used in children 2-12-year-old, with a well-padded spica cast applied simultaneously to the unaffected side.

(158) (B) Iron overdose.

- Iron poisoning is an iron overload caused by a large excess of iron intake and usually refers to an acute overload rather than a gradual one.
- The term has been primarily associated with young children who consumed large quantities of iron supplement pills, which resemble sweets and are widely used by pregnant women and others.
- The first indication of iron poisoning by ingestion is a pain in the stomach, as the stomach lining becomes ulcerated.
- This is accompanied by nausea and vomiting.
- The pain then abates for 24 hours as the iron passes deeper into the body resulting in metabolic acidosis, which in turn damages internal organs, particularly the brain and the liver.
- The body goes into shock and death from liver failure.

(159) (A) Gastric lavage.

- Management of aspirin poisoning:
- Gastric lavage.
- Activated charcoal.
- Obtain serum salicylate level after 6 hours of ingestion.
- Alkalinization of urine with sodium bicarbonate to a urine pH > 7 and large volume of IV fluid enhance renal excretion of salicylates.
- Hemodialysis.

(160) (A) Topical nystatin.

- Diaper rash is a general term that describes any inflammatory skin eruption in the diaper covered area.
- Rashes in the diaper area are one of the most common problems encountered in infants and toddlers, representing 10-20% of all skin disorders seen by general pediatricians.

(161) (C) Kerion.

erion is the result of the host response to fungal ringworm.

fection of the hair follicles of the scalp and beard accompanied by secondary bacterial infection.

usually presents with sites of raised spongy lesions, his honey comb is severely painful inflammatory reaction with deep suppurative lesion on the scalp, the follicle may have discharging pus.

(162) (B) Napkin dermatitis.

Topical steroid and/or antifungal cream can be used in treatment of napkin dermatitis, ideally, the first-line therapy for individuals with diaper dermatitis is zinc oxide ointment or various products containing zinc oxide

(163) (A) Vitamin D deficiency.

ickets due to deficiency of vitamin D.

(164) (D) Deferoxamine IV.

deferoxamine, an iron binding ligand, given if:

serum iron levels > 500 µg/dl, or if > 300 µg/dl and acidosis, hyperglycemia, or leukocytosis are present.

severe gastrointestinal tract symptoms are present.

More than 100 mg/kg of iron is ingested.

(165) (A) Increase fluid intake.

additional things to consider to help prevent recurrent urinary tract infection in kids include encourage child to drink 8-10 glasses of water and other fluids per day, frequent emptying of the bladder, normal urination and prevention of constipation, taking multivitamins, avoid bubble baths and perfumed soaps because they can irritate the urethra, frequent diaper changes, wiping from front to back in males after using the toilet, breathable cotton underwear and frequent bathroom visits.

(166) (D) Both A and B.

(167) (C) Alarm therapy.

In general, children under 5-year-old do not require treatment other than explanation, reassurance and practical advice for parent and child.

For children between 5-7-year-old, star charts, rewards and positive reinforcement may be the first line and occasionally medications or alarms may be used.

For those over 7-year-old, the choice of treatment usually lies between alarms and drug treatment as the enuresis is likely to be more distressing and will be impacting the child's social life.

Desmopressin is a synthetic analogue of human arginine vasopressin and acts by binding V2 receptors in the renal tubules and collecting system, leading to an increase in water permeability and thus water reabsorption, leading to smaller volumes of more concentrated urine being produced, desmopressin is licensed for the treatment of nocturnal enuresis in children over 6-year-old. Pharmacologic treatment is not recommended for children under 6-year-old. The bed wetting alarm has been shown to be the most effective treatment for nocturnal enuresis. Compared to other pharmacologic treatments, the bed wetting alarm has a higher success rate and lower relapse rate.

(168) (D) the most common cause is falciparum.

- Plasmodium falciparum and Plasmodium vivax are the most common cause.
- Plasmodium falciparum is the most deadly.
- Although falciparum malaria is the most virulent, it is often not possible to determine the species of bacterium causing the infection on clinical grounds alone; there are some unique characteristics associated with each species of Plasmodium vivax, Plasmodium ovale and Plasmodium malariae.

(169) (D) Hypothyroidism.

- In hypothyroidism, thyroid function should always be evaluated, because growth failure may be the first or even the only manifestation of hypothyroidism.
- The evaluation should include measurements of both serum TSH and T4; both primary and central hypothyroidism can cause growth failure and measurement of serum TSH alone will not detect central hypothyroidism.

(170) (A) Methylphenidate.

- The most widely researched medications used in the treatment of attention deficit hyperactivity disorder are the psychostimulant medications, including methylphenidate, amphetamine and/or various dextroamphetamine preparations.

(171) (A) Urinalysis is the most important screening test in a child with enuresis.

- Etiologic factors to consider in diurnal enuresis include urinary tract infection.
- Urinalysis and urine culture will rule out both infectious causes and the elevated urine osmolality associated with diabetes.

(172) (A) Measles.

- Measles rash usually appears on the fifth day of illness.
- It begins as a maculopapular rash along the hair line on the forehead, back of neck and behind the ears.
- It spreads rapidly to involve the whole body as it covers the trunk at the end of the second day and by the end of the third day, the whole body becomes covered by the rash.
- The fever remains high during the appearance of the rash.

(173) (A) Augmentin.

- Use of (augmentin) or (unasyn) for human bites that may become or are already infected; such antibiotics are usually effective against Eikenella corrodens, a bacteria species often involved in human bite infections.

(174) (A) Immediate surgical treatment.

- Reduction of an acute intussusception is an emergency procedure and performed immediately after diagnosis in preparation for possible surgery.
- In patients with prolonged intussusception with signs of shock, peritoneal irritation, intestinal perforation, or pneumatosis intestinalis, reduction should not be attempted.

(175) (C) Autosomal recessive or autosomal dominant.

- Polycystic kidney disease is an inherited disorder that may be autosomal recessive or autosomal dominant and affects both kidneys.
- Autosomal dominant polycystic kidney disease is the most common hereditary human kidney disease.
- Autosomal recessive polycystic kidney disease is an autosomal recessive disorder occurring with an incidence rate of 1:10,000 to 1:40,000.

The autosomal dominant pattern of inheritance occurs with an incidence of 1:500 to 1:1,000.

(176) (C) Respiratory alkalosis with metabolic acidosis.

• Pathophysiology of aspirin toxicity:

1- In early stages, salicylate will stimulate respiratory center which lead to increase respiratory rate then lead to respiratory alkalosis that will be compensated by metabolic acidosis.

2- in late stage, it will interfere with carbohydrate, fat and protein metabolism as well as oxidation phosphorylation leads to increase lactate, pyruvate and ketone bodies, all will lead to decrease pH.

- Signs and symptoms includes: nausea, vomiting, increase respiratory rate, fever, tachycardia, sweating, cerebral or pulmonary edema and coma.

- Laboratory findings:

1- Respiratory alkalosis with an anion gap metabolic acidosis.

2- Hyperglycemia, followed later by hypoglycaemia.

3- Hypokalemia.

- Treatment: hydration, correct potassium, gastric lavage or activated charcoal, urine alkalization, hemodialysis.

(177) (C) Restless leg syndrome.

- Restless leg syndrome signs and symptoms include: onset during inactivity, relief by movement, worsening of symptoms in the evening and night time leg twitching.

(178) (A) Involve arterioles, venules and capillaries.

- Henoch-Schonlein purpura is an IgA mediated vasculitis of small vessels.

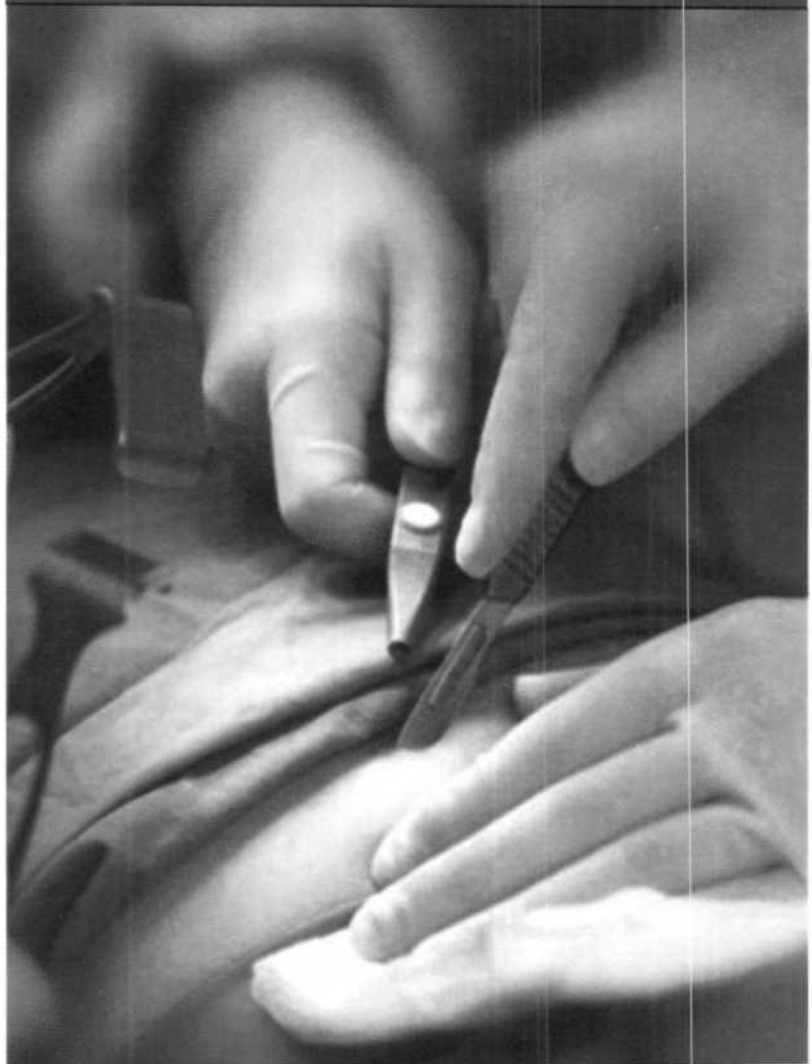
- Immunofluorescence techniques show deposition of IgA and C3 in the small vessels of the skin and the renal glomeruli; the role of complement activation is controversial.

(179) (D) No need for intervention.

- Accidental ingestion of oral contraceptive pills rarely produces any toxic effect other than transient gastrointestinal upset on the following day.

- Parents should be advised that vaginal bleeding could occur, in girls of all ages, during the first few days following ingestion.

GENERAL SURGERY



- (1) According to anatomy of the facial nerve, when it exits the temporomandibular joint and enters parotid gland, it passes:
- (A) Superficial to retromandibular vein and external carotid artery.
 - (B) Deep to external carotid artery.
 - (C) Deep to retromandibular vein.
 - (D) Between retromandibular vein and external carotid artery.
- (2) A 60-year-old patient post-surgery of cholecystectomy presented with unilateral face swelling, he gave a past history of measles when he was young. On examination, his swelling seems tender, moist mouth and slightly cloudy saliva. By investigation; saliva show neutrophils and band cells, but culture of saliva was not diagnostic. What is the most likely diagnosis?
- (A) Sjogren's Syndrome.
 - (B) Parotid cancer.
 - (C) Bacterial sialadenitis.
 - (D) Salivary gland stone.
- (3) A 56-year-old male patient was diagnosed with papillary thyroid cancer. What is the treatment?
- (A) Surgical resection.
 - (B) Radiation.
 - (C) Radioactiveiodine.
 - (D) Chemotherapy.
- (4) A patient known case of chronic alcoholism since long time presented with lymph node enlargement in midcervical. What is the next step?
- (A) Laryngoscope.
 - (B) Excisional biopsy.
 - (C) Needle biopsy.
 - (D) Neck x-ray.
- (5) A male patient has a history of parotid and salivary gland enlargement, presented with dry eye, mouth and skin. By investigation: HLA-B8, DR3 and ANA came out to be positive and rheumatoid factor was positive. What is the treatment?
- (A) Physostigmine.
 - (B) Eye drops with saliva replacement.
 - (C) NSAIDs.
 - (D) Increase oral fluid intake.
- (6) A young male patient presented with fever and weakness. On examination he showed enlarged parotid glands. What is the complication?
- (A) Meningitis and encephalitis.
 - (B) Deafness.
 - (C) Orchitis.
 - (D) All of the above.

- (7) A patient presented with submandibular swelling associated with pain during eating. What is the first investigation that should be done?
- (A) X-ray.
 - (B) MRJ.
 - (C) CT.
 - (D) US.
- (8) What is the most common thyroid carcinoma in 32-year-old young male?
- (A) Medullary.
 - (B) Anaplastic.
 - (C) Follicular.
 - (D) Lymphoma.
- (9) Which of the following is not normal lypalpable?
- (A) Thyroid gland.
 - (B) Parotid gland.
 - (C) Sublingual gland.
 - (D) Cervical node.
- (10) A female patient was diagnosed with hypothyroidism; one week after starting levothyroxine she presented with cold intolerance and bradycardia. What is the next: step?
- (A) Continue levothyroxine and check after 1-2 months.
 - (B) Decrease the dose.
 - (C) Give iodine supplementation.
 - (D) Stop after TSH become normal.
- (11) A 35-year-old male smoker presented with white patch on the tongue, he received antibiotic but with no improvement. What is the management now?
- (A) Change the antibiotic.
 - (B) Excision biopsy.
 - (C) Give antiviral.
 - (D) Staining.
- (12) Which of the following is associated with thyroid cancer?
- (A) Euthyroid.
 - (B) Hyperthyroidism.
 - (C) Hypothyroidism.
 - (D) Graves' disease.
- (13) A 40-year-old male patient smoker and alcoholic for long time presented with painless ulcer on lateral border of the tongue. On examination the ulcer show role out border. What is the diagnosis?
- (A) Squamous cell carcinoma.
 - (B) Leukoplakia.
 - (C) Candidiasis.
 - (D) Lichen planus.

(14) When should be remove the suturing in facial injury?

- (A) After 1-2 days.**
- (B) After 3-5 days.**
- (C) After 7-10 days.**
- (D) After 14 days.**

(15) A patient presented with a midline neck swelling that moves with deglutition or protrude tongue. What is the diagnosis?

- (A) Colloid goiter.**
- (B) Thyroglossal cyst.**
- (C) Cystic hygroma.**
- (D) Thyroid carcinoma.**

(16) A Female presented with neck swelling. On examination it seemed firm, large and lobulated. By investigations; there are positive antibodies against thyroid peroxidase. What is the diagnosis?

- (A) Hashimoto's thyroiditis.**
- (B) Graves' disease.**
- (C) Hypopituitarism.**
- (D) Thyroid Lymphoma.**

(17) A patient presented with large neck mass in the lateral side. On examination: it seems huge, non-tender and mottled, with no other manifestations; no organomegaly or lymphadenopathy was present. What is the diagnosis?

- (A) Infectious mononucleosis.**
- (B) Goiter.**
- (C) Tuberculous lymphadenitis.**
- (D) Primary bacterial lymphadenitis.**

(18) Which of the following suggest that thyroid nodule is benign rather than malignant?

- (A) History of childhood head and neck radiation.**
- (B) Hard consistency.**
- (C) Lymphadenopathy.**
- (D) Presence of multiple nodules.**

(19) A patient presented with thyroid mass. On examination; it is firm, 2x2 cm. What is the most appropriate investigation for diagnosis?

- (A) Neck US.**
- (B) Fine needle biopsy.**
- (C) Neck CT.**
- (D) Neck MRI.**

(20) Which of the following is true about head and neck injury?

- (A) Hoarseness of voice and stridor can occur with mid facial injury.**
- (B) Tracheostomies contraindicated.**
- (C) Facial injury may cause upper air way injuries.**
- (D) Mandibular fracture usually a single fracture.**

- (21) A patient presented to ER with almost not breathing and cyanosed due to falling down from ladder. On examination; the right side of his chest appears to be hyperresnoant and there is no breath sound on auscultation.What is the management?
- (A) Right pneumonectomy.
 - (B) Observation.
 - (C) Tube thoracostomy.
 - (D) Lung pleurodesis.
- (22) A young adult patient presented with gasping. What is the first thing to do?
- (A) Intubation.
 - (B) Open the air way and give 2 breaths.
 - (C) Open the airway and look if there is foreign body.
 - (D) Observation.
- (23) What is the best radiological x-ray view to see the rib fracture?
- (A) Posterior-anterior x-ray view.
 - (B) Anterior-posterior x-ray view.
 - (C) Oblique x-ray view.
 - (D) Lateral x-ray view.
- (24) A male patient is presented to ER after RTA. He was conscious and complaining of chest pain and respiratory distress. On examination; tachycardia, tachypnea and hypotension, chest examination were noted. There was decreased air entry in the lift side and tracheal deviation to the opposite site. What is the first step of management?
- (A) Order chest x-ray stat.
 - (B) Insert a needle in the second intercostal space in mid clavicular line.
 - (C) Insert a needle in the fifth intercostal space in mid clavicular line.
 - (D) Insert a chest tube in the fifth intercostal space in mid clavicular line.
- (25) A young male patient presented to ER due to RTA with polytrauma. What is the best way to maintains airway in responsive polytrauma patient?
- (A) Oropharyngeal airway.
 - (B) Nasopharyngeal airway.
 - (C) Tracheostomy.
 - (D) Endotracheal intubation.
- (26) What is the management of conscious polytrauma patient?
- (A) ABCDE.
 - (B) Endotracheacheal intubations.
 - (C) Tracheostomy.
 - (D) Needle decompression.

(27) A patient suffered from trauma on his chest; after 2 hours he presented with increased heart rate and increased breathing rate. On examination: vital signs were HR = 120 bpm, RR = 40/min and BP = 100/70 mmHg. By investigations: chest x-ray shows white lung field in the left side of the chest.

What is the management?

- (A) Tube Thoracostomy.
- (B) Observation.
- (C) Needle decompression.
- (D) Tracheostomy.

(28) A patient with acute respiratory distress syndrome in hospital suddenly developed tension pneumothorax. What is the cause?

- (A) Severe lung injury.**
- (B) Negative pressure ventilation.
- (C) 100% oxygen.
- (D) Central line.

(29) Which one of the following is true regarding uncomplicated large pneumothorax?

- (A) There is deviation of trachea.
- (B) There is decrease in percussion of the affected side.
- (C) Mediastinal shift is to opposite side.
- (D) Tactile fremitus is present.

(30) What is the most reliable method to make sure proper tube positioning in intubated patient?

- (A) Breathing is heard bilaterally through 5 points auscultation.
- (B) Inspection of the chest.
- (C) Chest x-ray.
- (D) End-tidal carbon dioxide measurement.

(31) A middle-aged male patient brought to the ER after RTA; On arrival, the Glasgow coma scale is 12/15; mildly confused; tachycardiac (HR = 113 bpm); tachypneic (RR = 32/min); BP = 80/60 mmHg with mild traumatic lesion in his chest. Which one of the following should be considered as the first step of management?

- (A) Thoracostomy.
- (B) IV fluid.
- (C) CT scan.
- (D) US.

(32) A patient brought to ER after RTA. On examination it was found that the left ribcage moving inward during inspiration and outward during expiration. What is the diagnosis?

- (A) Flail chest.
- (B) Pneumothorax.
- (C) Hemothorax.
- (D) Cardiac tamponade.

- (33) A 29-year-old female presented with breast lump in the upper outer quadrant of the left breast which persist and slightly increase in size during menses. On examination, it was firm, non-tender, mobile, 2 cm in size, with no lymph nodes involvement. What is the most likely diagnosis?
- (A) Fibroadenoma.
 - (B) Fibrocystic breast.
 - (C) Ductal carcinoma.
 - (D) Papilloma.
- (34) What is the management of female patient with fibroadenoma?
- (A) Mammogram (true if patient > 35years).
 - (B) Excisional biopsy.
 - (C) Fine needle aspiration cytology.
 - (D) Breast US.
- (35) All of the following statement are correct about breast cancer except:
- (A) If it is less than 2 cm mass with free axilla lymph nodes is stage I.
 - (B) Chemotherapy is must for pre-menopausal with positive axilla lymph nodes.
 - (C) Radical mastectomy is the choice of surgery.
 - (D) Yearly mammogram for contra-lateral breast.
- (36) All of the following factors are associated with an increased relative risk of breast cancer except
- (A) Nulliparity.
 - (B) Menopause before 40-year-old.
 - (C) Early menarche.
 - (D) First term pregnancy after 35-year-old.
- (37) A 30-year-old female presented with painless breast lump. By investigations: US showed a cystic lesion, aspiration of the whole lump content was done and the fluid was clear. What is the next step?
- (A) Do nothing and no follow-up.
 - (B) Send the aspirated content for cytology and if abnormal do mastectomy.
 - (C) Reassure the patient that this lump is a cyst and reassess her in 4 weeks.
 - (D) Book the patient for mastectomy as this cyst may change to cancer.
- (38) A female patient presented with breast cyst, after the aspirations of this cyst the fluid was green in color. What is the next step in management?
- (A) Throw the fluid away.
 - (B) Surgical excision of the cyst.
 - (C) Send for cytological examination.
 - (D) Follow up after 6 months.
- (39) All of the following statements about adjuvant multi-agent cytotoxic chemotherapy for invasive breast cancer are correct except:
- (A) Increases the survival of node-positive pre-menopausal women.
 - (B) Increases the survival of node-negative pre-menopausal women.
 - (C) Increases the survival of node-positive post-menopausal women.
 - (D) Is usually given in cycles every 3-4 weeks for a total period of 6 months or less.

(40) What is the most important predisposing factor for developing an acute breast infection?

- (A) Trauma.**
- (B) Breastfeeding.**
- (C) Pregnancy.**
- (D) Poor hygiene.**

(41) A 46-year-old female wrestler presented with a painful mass 1x2 cm in the upper outer quadrant of her left breast. On examination there are areas of ecchymosis laterally on both breasts, there is skin retraction overlying the left breast mass. What is the most likely diagnosis?

- (A) Fat necrosis.**
- (B) Thrombophlebitis.**
- (C) Hematoma.**
- (D) Intraductal carcinoma.**

(42) Which of the following cause giant breast?

- (A) Diffuse hypertrophy of breast.**
- (B) Cystosarcoma phyllodes.**
- (C) Giant fibroadenoma.**
- (D) All of the above.**

(43) An elderly female patient presented with skin changes near areola due to using of a new detergent according to her. After 2 weeks treatment with steroid cream it was not resolved. What is the management now?

- (A) Mammography.**
- (B) CBC.**
- (C) US.**
- (D) Fine needle biopsy.**

(44) A 14-year-old female presented with bilateral breast mass, with no family history of cancer. What is the most likely diagnosis?

- (A) Fibroadenoma.**
- (B) Fibrocystic changes.**
- (C) Breast cancer.**
- (D) Sclerosing adenosis.**

(45) What is the best investigation for cystic breast mass?

- (A) US.**
- (B) Fine needle biopsy.**
- (C) Mammogram.**
- (D) Excisional biopsy.**

- (46) A 42-year-old woman presented with a painful breast mass about 4 cm in the upper lateral quadrant, which increases in size with the menstrual period. On examination; there is tender nodularity of both breasts. What is the management?
- (A) Hormonal treatment with oral contraceptive pills.
 - (B) Hormonal treatment with danazol.
 - (C) Lumpectomy.
 - (D) Observation for 6 months.
- (47) A 50-year-old female was diagnosed with breast cancer. By investigations: CA-125 is elevated. What is the cause of this elevation?
- (A) Breast cancer.
 - (B) Associate with ovarian cancer.
 - (C) Due to old age.
 - (D) Normal variation.
- (48) A female patient presented with breast mass not related to menses. On examination nodular and tender breast was noted. What is the diagnosis?
- (A) Breast cancer.
 - (B) Noncyclical mastalgia.
 - (C) Fibroadenoma.
 - (D) Fibrocystic changes.
- (49) A female patient presented with lump in breast. Which one of the following indicated that the cyst after fine needle biopsy is benign?
- (A) Cystic lesion with serous fluid that does not refill again.
 - (B) The aspiration is bloody.
 - (C) The lump is solid rather than cystic.
 - (D) Cytology study shows hyperchromatic changes.
- (50) What is the management of benign cyst breast?
- (A) Mammogram.
 - (B) Excisional biopsy.
 - (C) Fine needle biopsy cytology.
 - (D) Follow up in 6 months.
- (51) What is the most common cause of the pain in breast especially above the areola?
- (A) Fibrocystic changes.
 - (B) Fibroadenoma.
 - (C) Breast cancer.
 - (D) Sclerosing adenosis.
- (52) What is the appropriate time for breast self-examination for 25-year-old female?
- (A) 6-7 days after cycle begin.
 - (B) 5 days before cycle begin.
 - (C) 7-10 days after cycle begin.
 - (D) 14-16 days after cycle begin.

(53) A 45-year-old female presented with nipple discharge containing blood. On examination there is cystic swelling near areola. What is the most likely diagnosis?

- (A) Intraductal papilloma.
- (B) Duct ectasia.
- (C) Breast abscess.
- (D) Fibroadenoma.

(54) A 31-year-old female presented with cyclic bilateral nodularity in her breast since 6 months. On examination there is 3 cm tender mobile mass. What is the next step?

- (A) Fine needle biopsy with cytology.
- (B) Mammogram.
- (C) Follow up for next cycle.**
- (D) Biopsy.

(55) What is the factor determine recurrence of breast cancer?

- (A) Site and size of breast mass.
- (B) Number of lymph nodes involvement.
- (C) Positive estrogen receptor.
- (D) Positive progesterone receptor.

(56) A 36-year-old female presented with breast mass which changes with menstrual cycle. On examination it was found mobile, but no skin dimple. By investigation mammogram finding is not diagnostic. What is the next step?

- (A) Reassurance.
- (B) Biopsy.
- (C) Fine needle biopsy.
- (D) Oral contraceptive pills.

(57) Which of the following statement is false regarding the treatment of breast cancer?

- (A) Patients who are estrogen-receptor-negative are unlikely to respond to anti-estrogen therapy.
- (B) The treatment of choice for stage I disease is modified mastectomy without radiotherapy.
- (C) Patients receiving radiotherapy have a much lower incidence of distant metastases.
- (D) Anti-estrogen substances result in remission in 60% of patients who are estrogen- receptor -positive.

(58) Which of the following breast mass is bilateral?

- (A) Paget disease.
- (B) Lobular carcinoma.
- (C) Ductal carcinoma.
- (D) Mucinous carcinoma.

(59) A lady came to the clinic and she said that she does not want to do mammogram and preferred to do breast self- examination, what is the advice for her?

- (A) Mammogram will detect deep tumor.
- (B) Self-examination and mammogram are complementary.
- (C) Self-examination is best to detect early tumor.
- (D) Breast self-examination does not give a much benefit to detect breast lump.

(60) What is the best frequency for breast self-examination?

- (A) Daily.
- (B) Weekly.
- (C) Monthly.
- (D) Annually.

(61) Which one of the following is a strong indicator to do diagnostic peritoneal lavage?

- (A) Comatose patient due to severe head trauma.
- (B) Comatose patient with hypotension and abdominal distention.
- (C) Patient with pelvic fracture.
- (D) Conscious patient with severe abdominal pain and distention.

(62) A patient presented in the ER due to suffering from gunshot in his abdomen and part of his bowel spillage out. Beside surgical operation what is the antibiotic should be given to him?

- (A) Amoxicillin.
- (B) Erythromycin.
- (C) Metronidazole.
- (D) Gentamicin.

(63) What is the result of acute loss of body fluid in abdominal cavity?

- (A) Sepsis.**
- (B) Hypovolemic shock.
- (C) Cardiogenic shock.
- (D) Neurogenic shock.

(64) A young age male presented to ER due to suffering from blunt trauma to abdomen. Upon investigations CT showed intramural hematoma. What is the management?

- (A) Laparotomy with evacuation of the hematoma.
- (B) Dissection of duodenum.
- (C) Observation.**
- (D) Repeat CT after 8 hours.

(65) A patient presented to ER due to suffering from penetrating abdominal stab wound. By examination; vital signs are: HR = 98/min, BP = 140/80 mmHG, RR = 18/min and a part of omentum was protruding through the wound. What is the most appropriate next step?

- (A) Urgent US.**
- (B) Diagnostic peritoneal lavage.
- (C) Arrange for a contrast enhanced CT.
- (D) Exploratory laparotomy.

(66) A patient presented with fever and right hypochondrial pain. He has past history of bloody diarrhea with positive Entamoeba histolytica in stool. By investigations: liver aspiration shows anchovy sauce. What is the diagnosis?

- (A) Amoebic liver abscess.
- (B) Pyogenic liver abscess.
- (C) Fungal liver abscess.
- (D) Acute cholangitis

(67) A patient presented with nausea, vomiting and right upper quadrant pain which is radiating to the back. On examination: positive for Grey-Turner's sign and Cullen's sign. What is the diagnosis?

- (A) Acute pancreatitis.
- (B) Acute cholecystitis.
- (C) Acute appendicitis.
- (D) Liver abscesses.

(68) A patient presented with history of long standing abdominal pain which improve with peptic ulcer medication, distention, forceful vomiting and emesis contain morning food. What is the diagnosis?

- (A) Gastroparesis.
- (B) Gastric outlet obstruction.
- (C) Peptic ulcer.
- (D) Esophageal reflux.

(69) Which of the following is true regarding diagnosis of gastroesophageal reflux disease?

- (A) History only.
- (B) History and Barium enema.
- (C) History and upper gastrointestinal endoscopy.
- (D) Barium enema and colonoscopy.

(70) What is most appropriate investigation to *diagnose acute cholecystitis*?

- (A) Abdominal US.
- (B) Oral cholecystogram.
- (C) Isotope scan.
- (D) Abdominal x-ray.

(71) Patient known case of gastroesophageal reflux disease developed Barrett's esophagus. Which of the following malignancy its risk will increase with this metaplasia?

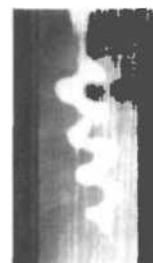
- (A) Adenocarcinoma.
- (B) Squamous cell carcinoma.
- (C) Dysplasia.
- (D) Carcinoma in situ.

(72) Which of the following is positive diagnostic peritoneal lavage?

- (A) 1,000 RBCs is diagnostic high-power field/cc.
- (B) 500 WBCs is diagnostic.
- (C) 2 ml of blood initial aspiration.
- (D) 2 ml of blood in pregnant.

(73) Which of the following will find corkscrew appearance in barium swallow x-ray?

- (A) Diffuse esophageal spasm.



(74) A patient presented with abdominal pain and distension with vomiting and constipation. On examination: he has signs of mild dehydration. By investigations: abdominal x-ray shows an evidence of air in the rectum. What is the treatment?

- (A) Rectal decompression with IV antibiotics.**
- (B) Intestinal decompression by nasogastric tube with IV isotonic fluid.**
- (C) Systemic antibiotics.**
- (D) Immunosuppressive agents.**

(75) What is the most common complication of acute pancreatitis?

- (A) Pancreatic abscess.**
- (B) Pancreatic pseudocyst.**
- (C) Bowel obstruction.**
- (D) Chronic pancreatitis.**

(76) A patient diagnosed with perforated gallbladder and cholecystectomy was done for him; after being discharged from hospital he has returned with fever. By investigations abdominal x-ray showed elevation of right hemidiaphragm. What is the diagnosis?

- (A) Subphrenic abscess.**
- (B) Liver abscess.**
- (C) Infected hematoma.**
- (D) Peritoneal abscess.**

(77) A patient is known case of sickle cell disease with recurrent crisis presented with abdominal pain with on and off pattern and diagnosed with asymptomatic recurrent gall stones. By investigations; US show multiple gallstones, the largest is 1 cm and they are not blocking the duct. What is the management?

- (A) Cholecystectomy.**
- (B) Hydroxyurea.**
- (C) Pain killers.**
- (D) Antibiotics.**

(78) A 72-year-old man presents with progressive deep jaundice over 2 weeks. On examination: there is palpable painless gallbladder. What is the diagnosis?

- (A) Cancer of the head of the pancreas.**
- (B) Gallstones.**
- (C) Carcinoma of the gallbladder.**
- (D) Hepatoma.**

(79) A 15-year-old patient presented with periumbilical pain for 6 hours which is shifted to the right lower quadrant of the abdomen and associated with nausea and vomiting. On examination: there was tenderness on deep palpation at right iliac fossa with positive psoas sign. What is the diagnosis?

- (A) Peptic ulcer.**
- (B) Crohn's disease**
- (C) Acute appendicitis.**
- (D) Ulcerative colitis**

(80) A patient with a history of appendectomy presented with abdominal distention, cramping abdominal pain, nausea, vomiting and constipation. On examination there were visible peristaltic waves and bowel sounds characterized by high-pitched tinkles and peristaltic rushes. What is the diagnosis?

- (A) Mechanical obstruction of small intestine.**
- (B) Paralytic ileus.**
- (C) Acute cholecystitis.**
- (D) Gallstone ileus.**

(81) What is the histological finding in appendix in patient with acute appendicitis?

- (A) Neutrophils in the muscularis propria.**
- (B) Lymphoid hyperplasia with giant cell infiltration.**
- (C) Dilated lumen filled with mucocoele.**
- (D) Plasma cells in the muscularis propria.**

(82) What is the most sensitive test for defining the presence of an inflammatory focus in appendicitis?

- (A) WBCs and neutrophils count.**
- (B) The patient's temperature.**
- (C) WBCs and eosinophils count.**
- (D) ESR.**

(83) What is the peak age for the incidence of acute appendicitis?

- (A) Between 2-5-year-old.**
- (B) Between 6-11-year-old.**
- (C) Between 12-18-year-old.**
- (D) Between 19-25-year-old.**

(84) Which of the following is true about acute appendicitis?

- (A) It occurs equally among men and women.**
- (B) With perforation will show fecoliths in 10% of cases.**
- (C) Without perforation will show fecoliths in fewer than 2% of cases.**
- (D) Has decreased in frequency during the past 20 years.**

(85) What is the mortality rate from acute appendicitis in the general population?

- (A) 4:100.**
- (B) 4:1,000.**
- (C) 4:10,000.**
- (D) 4:100,000.**

(86) A 27-year-old female presented with abdominal pain started at periumbilical region then shifted to right lower quadrant associated with anorexia, nausea and vomiting. On examination, temperature = 38°C, tenderness at right lower quadrant but there was no rebound tenderness. By investigations CBC showed slight elevation of WBCs count. What is the management?

- (A) Send her to home and ask her to come after 24 hours.**
- (B) Admission and observation.**
- (C) Further lab investigations.**
- (D) Start wide spectrum antibiotic.**

- (87) All of the following are signs and symptoms suggest acute appendicitis except:
- (A) Vomiting.
 - (B) Pain improving with sitting and leaning forward.
 - (C) Periumbalical pain shifting to right lower quadrant.
 - (D) Fever 38°C.
- (88) Which of the following is the most diagnostic feature in acute appendicitis?
- (A) Fever.
 - (B) Diarrhea.
 - (C) Leukocytosis.
 - (D) Tenderness at right lower quadrant of the abdomen with rebound tenderness.
- (89) Which one of the following is true regarding acute appendicitis in elderly?
- (A) WBCs are often normal.
 - (B) Rupture is common.
 - (C) If there is no fever the diagnosis of appendicitis is unlikely.
 - (D) Anemia is common.
- (90) Which of the following is true about acute appendicitis in children?
- (A) Leukocytosis is diagnostic.
 - (B) Rarely perforated if it is not well treated.
 - (C) May cause intestinal obstruction.
 - (D) None of the above.
- (91) What is the prophylactic antibiotic before appendectomy?
- (A) Cefoxitin.
 - (B) Ceftriaxone.
 - (C) Cefuroxime.
 - (D) Penicillin.
- (92) What is the treatment of indirect inguinal hernia?
- (A) Elective surgery.
 - (B) Emergency surgery.
 - (C) Reassurance.
 - (D) No need for any surgery.
- (93) A 24-year-old patient presented with known case of asymptomatic small congenital inguinal hernia. What is the treatment?
- (A) Elective surgery if it is reducible.
 - (B) Contraindication to do surgery in reducible hernia.
 - (C) Immediate surgery.
 - (D) Surgery indicated when he is above 35-year-old.

(94) What is the relation of indirect hernia to spermatic cord?

- (A) Superior medial.**
- (B) Superior lateral (anterolateral).**
- (C) Inferior medial.**
- (D) Posterior.**

(95) A male patient presented with swelling on top of the scrotum. On examination: it increases in size with Valsalva maneuver. What is the most likely diagnosis?

- (A) Direct inguinal hernia.**
- (B) Indirect inguinal hernia.**
- (C) Varicocele.**
- (D) Femoral hernia.**

(96) An elderly patient was diagnosed with a colorectal carcinoma which was removed by hemicolectomy. How frequent he should visit the physician for follow up?

- (A) Every 6 months.**
- (B) Every 12months.**
- (C) Every 2 years.**
- (D) Every 5 years.**

(97) What is the prognosis of colon cancer stagel?

- (A) More than 90%.**
- (B) 70%.**
- (C) 40%.**
- (D) Less than 10 %.**

(98) A 60-year-old patient was diagnosed with colon cancer and underwent colectomy; a micrometastasis was detected in the lymph nodes. Which of the following is true?

- (A) It is sensitive to chemotherapy.**
- (B) Lymph nodes status has no role in the assessment of prognosis.**
- (C) It is locally advanced.**
- (D) None of the above.**

(99) A 40-year-old male patient presented with abdominal pain, constipation, who underwent abdominal surgery 2 years ago. On examination: decrease bowel movements were noted. Abdominal x-ray showed distended colon, the plicae appear to extend entirely across the lumen. What is the management?

- (A) Surgical colostomy.**
- (B) Removal of obstructed colon part.**
- (C) Remove the colon completely.**
- (D) None of the above.**

(100) When should chemotherapy for stage m of colon cancer be started?

- (A) As soon as possible.**
- (B) If the lab results normalized.**
- (C) According the patient psychology.**
- (D) If the patient is above 60-year-old.**

(101) Which of the following is a high risk factor for colorectal carcinoma?

- (A) Familial adenomatous polyposis.**
- (B) A diet high in red meat.**
- (C) Smoking.**
- (D) Obesity.**

(102) Which of the following statement if patient should go immediately to surgery in Crohn's disease?

- (A) Fistula formation.**
- (B) Intestinal obstruction.**
- (C) Abdominal mass.**
- (D) Intestinal bacterial overgrowth.**

(103) Which one of the following decreases the chance of colon cancer?

- (A) Zinc.**
- (B) Vitamin D.**
- (C) Vitamin C.**
- (D) Folic acid.**

(104) Which one of the following factors mostly determiner for the recurrence of colorectal cancer?

- (A) Age of the patient.**
- (B) Staging.**
- (C) Family history.**
- (D) Gender.**

(105) All of the following should be avoided in patient with celiac disease except:

- (A) Wheat.**
- (B) Oat.**
- (C) Rice.**
- (D) Barley.**

(106) A patient known case of ulcerative colitis since long period. On examination endoscopy showed multiple polyps and a cancer lesion on the left colon. What is the treatment?

- (A) Remove the polyps.**
- (B) Left hemicolectomy.**
- (C) Total colectomy.**
- (D) Treatment of anemia.**

(107) Which of the following is correct regarding colon cancer stage OB?

- (A) No lymph node metastases.**
- (B) One lymph node metastasis.**
- (C) 2-4 lymph nodes metastasis.**
- (D) Lymph node metastasis and distant metastasis.**

(108) A patient presented with left lower abdominal pain, fever and constipation. By investigations: CT reveals thickening of the sigmoid and decrease perianal fat. What is the management?

- (A) Start antibiotics.
- (B) Call the surgeon for immediate surgery.
- (C) Give him laxative.
- (D) Barium enema.

(109) What is the role of surgery in stage II colon cancer?

- (A) Curative.
- (B) Palliative.
- (C) Diagnostic.
- (D) Exploratory.

(110) What is the best investigation to diagnose acute diverticulitis?

- (A) US.
- (B) Barium enema.
- (C) CT.
- (D) Colonoscopy.

(111) An elderly patient presents with right lower quadrant fullness, weight loss and changed bowel habits. On examination he appeared pale. By investigations: he was anemic. What is the investigation of choice?

- (A) Colonoscopy.
- (B) Sigmoidoscopy.
- (C) Fecal occult blood test.
- (D) Pelvic x-ray.

(112) A young male patient presented with 3 day of dysuria, anal pain, loin pain and fever. On examination; per-rectum examination; there is a boggy mass. What is the diagnosis?

- (A) Acute prostatitis.
- (B) Cystitis.
- (C) Urinary calculi.
- (D) Benign prostatic hyperplasia.

(113) A young male patient presented with only gross hematuria, appears otherwise normal. On examination: normal. By investigations:US is normal, urine culture normal. What is the best investigation for this patient?

- (A) Renal biopsy.
- (B) Urine analysis.
- (C) Cystoscopy.
- (D) Renal angiography.

(114) A young male patient presented with urgency, dysuria and flank pain. What is the diagnosis?

- (A) Pyelonephritis.
- (B) Renal stone.**
- (C) Benign prostatic hyperplasia.
- (D) Urethral injury.

(115) A 42-year-old man presented with a non-healing genital ulcer that persisted for 6 weeks, the erosion was initially small and painless, but rapidly developed into a superficial ulcer, the patient did not use condoms, but had no known history of sexually transmitted diseases; he gave history of having genital ulcers on the same area in the past but did not seek any medical attention because they were painless and healed spontaneously. What is the next step?

- (A) Take biopsy.
- (B) Dark field microscopy.
- (C) CBC.
- (D) Observation.

(116) What is the best initial treatment of traumatic injured membranous urethra?

- (A) Transurethral catheter.
- (B) Supra-pubic catheter.
- (C) Perineal repair.
- (D) Retropubic repair.

(117) What is the most common symptom or sign of renal cell carcinoma in adult?

- (A) Hematuria.
- (B) Abdominal mass.
- (C) Flank pain.
- (D) Hypertension.

(118) A young patients presented with severe testicular pain. By investigations: decrease in duplex supply to testis was noted. What is the management?

- (A) Refer to surgeon.
- (B) Refer to urologist.
- (C) Start analgesic.
- (D) Observation.

(119) A 3-year-old child was diagnosed with acute urinary tract infection. What is the first thing to do to protect renal damage?

- (A) Indwelling Foley catheter drain.
- (B) Voiding cystogram.
- (C) Cystoscopy.
- (D) Start antibiotics.**

(120) Healthy child with RBCs in urine about 15 cells/high-power field. What is the next investigation?

- (A) Repeat urine analysis for blood and protein.
- (B) Abdominal US.
- (C) X-Ray KUB.
- (D) Renal biopsy.

(121) A patient presented with urinary dripping and hesitancy and was diagnosed with mild Benign prostatic hyperplasia. What is the management?

- (A) Transurethral retrograde prostatectomy.**
- (B) Start on medication (alpha-blocker).**
- (C) Open prostatectomy.**
- (D) Prostate specific antigen (PSA) screening.**

(122) A middle-aged male patient presented with hematuria. On examination; he has right and left palpable masses. By investigations; there is uremia. What is the diagnosis?

- (A) Hepatorenal syndrome.**
- (B) Supra hepatoma.**
- (C) Polycystic kidney disease.**
- (D) Pancreatic tumor.**

(123) A 24-year-old healthy male presented with right testis swelling and according to the patient it is growing with time. On examination: there is a large right mass, not tender. What is the most appropriate step in this situation?

- (A) Refer patient to do open biopsy or percutaneous biopsy.**
- (B) US.**
- (C) Observation and follow up next month.**
- (D) Urgent surgery.**

(124) A patient presented with testicular fullness. On examination: the swelling is like a bag of worm, with positive Valsalva maneuver. What is the diagnosis?

- (A) Varicocele.**
- (B) Spermatocele.**
- (C) Hydroceles.**
- (D) Hematoceles.**

(125) An elderly patient presented with loin pain. By investigations; US show bilateral hydronephrosis. What is the cause?

- (A) Bladder cancer.**
- (B) Prostatic hypertrophy.**
- (C) Urethral stricture.**
- (D) Fibrosis.**

(126) Which of the following medication should not be used with sildenafil (Viagra) to prevent hypotension?

- (A) Nitrates.**
- (B) Beta-blockers.**
- (C) Angiotensin converting enzyme inhibitors.**
- (D) Calcium channel blockers.**

(127) Which of the following is true about a child with undescended testes?

- (A) Need surgery in first 6-month-old.**
- (B) Need surgery at 6-18-month-old.**
- (C) Need surgery 6-18-year-old.**
- (D) Conservative treatment.**

(128) Which one of the following is true about 6-month-old baby with undescended testis?

- (A) He needs immediate surgical operation.**
- (B) In most of the cases spontaneous descent after 1-year-old.**
- (C) Surgical operation is indicated when he is 4-year-old.**
- (D) Unlikely to become malignant.**

(129) A middle-aged woman with known case of multiple sclerosis presented with urinary incontinence, she does not feel the urge to empty her bladder but urine incontinence occurs. Which type of incontinence he has?

- (A) Reflex incontinence**
- (B) Overflow incontinence.**
- (C) Urge incontinence.**
- (D) Stress incontinence.**

(130) A child presented with nocturnal enuresis. What is the investigation should be done?

- (A) CBC.**
- (B) Kidney function test.**
- (C) Urine culture.**
- (D) Renal biopsy.**

(131) A male patient has urethral stricture since long time, presented with tender right testis. By investigation: WBCs in urine was found. What is the diagnosis?

- (A) Epididymo-orchitis.**
- (B) Testicular torsion.**
- (C) Varicocele.**
- (D) Hydrocele.**

(132) An 80-year-old male presented to ER with complaining of acute urine retention. What is the initial management?

- (A) Send patient immediately to OR for prostatectomy.**
- (B) Empty urinary bladder by Foley catheter and tell him to come back to clinic.**
- (C) Give antibiotics because retention could be from some sort of infection.**
- (D) Admission and investigation which include cystoscopy and then maybe he needs transurethral resection of the prostate.**

(133) An elderly male patient presented with acute hematuria, passing red clots, right testicular pain and flank pain. What is the diagnosis?

- (A) Renal cell carcinoma.**
- (B) Cystitis.**
- (C) Epididymo-orchitis.**
- (D) Prostatitis.**

(134) A patient is a known case of gout presented with frequent renal stones with increased creatinine and urea, but between the attacks they decreased. How to decrease the frequency of attacks?

- (A) Increase fluid intake.**
- (B) In take claries.**
- (C) Allopurinol.**
- (D) Propenside.**

(135) A young male presented with acute scrotal pain. On examination the scrotum appeared red and swollen. By investigations: US showed reduced blood flow. What is the diagnosis?

- (A) Testicular torsion.**
- (B) Trauma.**
- (C) Infection.**
- (D) Hernia.**

(136) What is the best investigation that has the most specificity and sensitivity to diagnose renal stones?

- (A) Non-contrast spiral CT scan of the abdomen.**
- (B) Abdominal US.**
- (C) KUB.**
- (D) IV pyelography.**

(137) A female patient presented with dysuria, urgency and passed small amount of urine. She received several courses of antibiotics over the last months but with no improvement. By investigations: urine analysis and culture with CBC are normal. What is the diagnosis?

- (A) Interstitial cystitis.**
- (B) Diabetes mellitus.**
- (C) Cervical erosion.**
- (D) Candida albicans.**

(138) Which one of the following is true regarding hemorrhoids?

- (A) Painless bleeding.**
- (B) Grade I treated by surgery.**
- (C) Sclerotherapy is ideal for treatment of external hemorrhoids.**
- (D) Pain is often associated with uncomplicated hemorrhoids.**

(139) A 40-year-old patient presented with sudden onset of rectal painful spasm associated with tachycardia and diaphoresis that occurred when he was asleep?

- (A) Irritable bowel Syndrome.**
- (B) Thrombosed hemorrhoid.**
- (C) Ulcerative colitis.**
- (D) Proctalgia fugax.**

(140) Which of the following is true regarding hemorrhoids?

- (A) Can be due to portal hypertension and pregnancy.**
- (B) Pain is often associated with uncomplicated hemorrhoids.**
- (C) Internal hemorrhoids are covered by skin whereas external hemorrhoids are covered by mucosa.**

(141) A 15-year-old male was diagnosed with pilonidal sinus. What is the treatment?

- (A) Incision surgery.**
- (B) Local antibiotic.**
- (C) Daily clean.**
- (D) Band ligation.**

(142) A patient presented with hemorrhoids which is prolapsed and cannot be manually reduced. What is the treatment?

- (A) Hemorrhoidectomy.**
- (B) Band ligation.**
- (C) Sclerotherapy.**
- (D) Fiber diet.**

(143) What is the most common site of anal fissure?

- (A) Anterior.**
- (B) Posterior.**
- (C) Lateral.**
- (D) Anterior and Lateral.**

(144) What is the treatment of painful hemorrhoids?

- (A) Excision and drainage.**
- (B) Steroid injection.**
- (C) Antibiotic.**
- (D) Fiber diet and analgesics.**

(145) A 60-year-old female presented with a history of hemorrhoids for 10 years with no complication. What is the treatment?

- (A) Observation.**
- (B) Surgery.**
- (C) Increase fiber diet.**
- (D) Nothing to be done.**

(146) What is the most common cause of chronic irregular rectal bleeding?

- (A) Diverticulitis.**
- (B) Hemorrhoids.**
- (C) Colon Cancer.**
- (D) Ulcerative colitis.**

(147) A male patient presented with history of noticing blood on the toilet paper during defecation, with persistent rectal discomfort. What is the diagnosis?

- (A) Ulcerative proctitis.**
- (B) Crohn's disease of the anus.**
- (C) Hemorrhoids.**
- (D) Abscess.**

(148) A male patient presented with perianal pain. On examination; there is small swelling which is tender and fluctuant. What is the management?

- (A) Incision and drainage.**
- (B) Warm bath.**
- (C) Antibiotic.**
- (D) Never drainage.**

(149) A patient known case of long history of constipation presented with painful defecation, followed by bleeding, the pain persists for hours after defecation. What is the diagnosis?

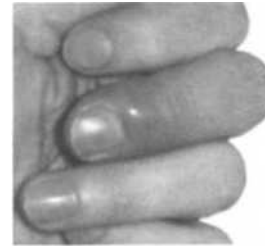
- (A) Anal fissure.**
- (B) Thrombosed external hemorrhoid.**
- (C) Internal hemorrhoid.**
- (D) External hemorrhoid.**

(150) What is the first step of management in mild bum?

- (A) Wash by water with room temperature.**
- (B) Place an ice.**
- (C) Put butter.**
- (D) Cover with bandage.**

(151) A patient presented with redness of finger just above the nail bed which it is painful; Augmentin for one week did not show improvement, so what is the management now?

- (A) Incision and drainage under general anesthesia.-**
- (B) Incision and drainage under local anesthesia.**
- (C) Give Augmentin for another week.**
- (D) Change antibiotic.**



(152) Which rule is used to calculate body surface area in case of burn?

- (A) Fine.**
- (B) Seven.**
- (C) Nine.**
- (D) None of the above.**

(153) What is the treatment of folliculitis?

- (A) Oral steroid.**
- (B) Topical steroid.**
- (B) Oral antibiotics.**
- (D) Topical antifungal.**

(154) A patient presented with tender and swollen calf and diagnosed to have DVT. What is the rule of low molecular weight heparin in DVT treatment as compared to others heparin?

- (A) Low molecular weight heparin is less effective.**
- (B) Low molecular weight heparin is prone to more bleeding.**
- (C) Low molecular weight heparin is safe and does not require regular monitoring the patient.**

(155) A patient presented with burn by hot oil in the right side of his arm and leg. What is the indication to refer him to burn clinician specialist?

- (A) 10 cm painful area with no blisters.
- (B) 5 cm painful area with blisters.
- (C) 5 cm painless area with no blisters (third degree, full thickness).
- (D) If it is less than 5% total body surface area.

(156) A female patient with known case of non-complicated varicose vein which has not changed since its occurrence during her last pregnancy. She wears stocks and elevates her legs. Which of the following is true regarding cosmetic operation?

- (A) Nothing can be done more.
- (B) Stripping will make it worse.
- (C) Coagulation therapy.
- (D) Saphenous vein laser treatment.

(157) A young patient presented with back pain which prevented him from sleeping. By investigation: MRI show spinal disc herniation. What is the initial treatment?

- (A) Surgical operation.
- (B) Epidural steroid injection.
- (C) Spinal analyzing.
- (D) Spinal manipulation.

(158) A female patient presented with bilateral femur fracture due to RTA. On examination; she has hypotension. What is the management?

- (A) IV fluid.
- (B) Blood transfusion.
- (C) Give her morphine.
- (D) External fixation.

(159) A patient presented with mass in the upper back, with punctum and releasing white frothy material. What is the management?

- (A) Antibiotic must be given, then remove the mass.
- (B) Steroid will decrease its size.
- (C) It can be treated with cryotherapy.
- (D) It must be removed as a whole to keep the dermis intact and to prevent spread of infection.

(160) A 40-year-old female patient works most of the time on computer presents with wrist pain. On examination, patient has positive tinel sign. What is the position of wrist splint should be applied?

- (A) Dorsiflexion position.
- (B) Planter flexion position.
- (C) Radial deviation position.
- (D) Ulnar deviation position.

(161) A female patient presented with big abscess in her left arm. What is the management?

- (A) Antibiotic.**
- (B) Antibiotics, incision and drainage.**
- (C) Topical Steroid.**
- (D) Cold compression.**

(162) What is the toxicity of silver sulfadiazine which it is used in treatment of burn?

- (A) Leukocytosis.**
- (B) Leukopenia especially neutropenia.**
- (C) Skin discoloration.**
- (D) Electrolyte imbalance.**

(163) What is the most common symptom of soft tissue sarcoma?

- (A) Paralysis.**
- (B) Growing painless mass.**
- (C) Pain.**
- (D) Nausea and vomiting.**

(164) A female patient presented to ER with hydrochloric acid (HCL) burn on her face.

On examination: there was partial thickness burn. What is the management?

- (A) Irrigation with water.**
- (B) Irrigation with sodium bicarbonate.**
- (C) Exposed to air.**
- (D) Immediate debridement.**

(165) A male patient presented with pain in the posterior aspect of the thigh, he was running long distance then felt a pop in his thigh. On examination: erythema, swelling and tenderness, but with no other defect was noted. What is the best treatment?

- (A) Surgery.**
- (B) Ice, rest, bandages and elevation of the limb.**
- (C) Bandages only.**
- (D) Splint.**

(166) A patient with head trauma presented with periorbital swelling and possible blowout fracture.

Which of the following is true?

- (A) Air-fluid level in the CT will exclude blowout fracture.**
- (B) Globe injury is rare.**
- (C) Most fractures occur in the posterior medial region that is comprised of the thinnest bones.**
- (D) MRI is diagnostic.**

(167) A patient presented with heavy bleeding of upper limb due to RTA. What is the initial treatment?

- (A) ABC.**
- (B) Call orthopedic.**
- (C) Press the bleeding site.**
- (D) Take him to OR.**

(168) What is the role of vitamin C in wound healing?

- (A) Collagen synthesis.**
- (B) Wound contraction.**
- (C) Clotting cascade initiation.**
- (D) Formation of granulation tissue.**

(169) A 26-year-old psychotic patient presented to the hospital 3 hours after ingestion of 3 pins. On examination: nothing abnormal was detected. By investigations: x-ray showed 3 pins in small intestine but with no intestinal dilation or air fluid level. What is the management?

- (A) Admit the patient to the hospital for serial x-rays and abdominal examination.**
- (B) Send the patient home and give appointment for follow up.**
- (C) Start antibiotics and send home.**
- (D) Admit the patient and start antibiotics.**

(170) What is the most common cause of immediate death in flame burn victims?

- (A) Gas inhalation.**
- (B) Associated injuries.**
- (C) Hypovolemic shock.**
- (D) Sepsis.**

(171) A female patient presented with abdominal pain gave history of abdominal surgery one month ago. By investigations; abdominal x-ray show metallic piece (scissor) which was missed during operation. What is the action now?

- (A) Call attorney and ask about legal action.**
- (B) Tell her what you found and refer to surgery.**
- (C) Refer her to surgery, but do not tell her what you found.**
- (D) Tell her that is one of possible complications of operation.**

(172) A patient presented with burn in head and neck region. On examination: there are mixed first and second degree burns. What is the most appropriate management?

- (A) Apply silver sulfadiazine cream to all burned areas, cover them and admit to hospital.**
- (B) Apply silver sulfadiazine cream to second degree burns and cover them and give IV fluid.**
- (C) Debridement of second degree burns and give IV fluid.**
- (D) Apply silver sulfadiazine cream then Vaseline gel to all areas then discharge the patient.**

(173) A patient is brought to ER after RTA and he has clinically bilateral pelvic fracture. On examination; his skin is cold, BP = 90/70 mmHg, HR =140 bpm, RR = 40/min. What is the initial management?

- (A) Rapid IV fluid crystalloid.**
- (B) Blood transfusion.**
- (C) Splint fracture.**
- (D) Give vasopressors.**

(174) A 25-year-old male had been stabbed on mid triceps, after one week of dressing they remove the dressing and there is greenish fluid discharge. On microscopic examination of this greenish fluid shows Gram-positive cocci in chain. What is the cause?

- (A) Streptococcal gangrene.
- (B) Clostridial gas gangrene.
- (C) Fournier's gangrene.
- (E) Staphylococcal disease.

(175) An adult healthy male presented with tender red swelling on right hand up to forearm. He said it happened following a trauma a week age. On examination: there is large pore in skin and black head. What is the management?

- (A) Topical antibiotic.
- (B) Topical antifungal.
- (C) Cryosurgery.
- (D) Oral antibiotic.**

(176) A patient with high output fistula, on total parenteral nutrition was ordered a few weeks, 2 units of blood given and after 2 hours the patient become comatose and unresponsive. What is the most likely cause?

- (A) Septic shock.
- (B) Electrolytes imbalance.**
- (C) Delayed response of blood mismatch.
- (D) Hypernatremia.

(177) Which one of the following is true about DVT?

- (A) Anticoagulant low molecular weight heparin (enoxaparin) is prescribed for 6 months.
- (B) Thrombus start formed in inferior vena cava then descends.
- (C) A venous thrombectomy is most useful treatment.
- (D) Protein C deficiency and protein S deficiency play a role in DVT formation.

(178) A patient presented with torso pain after using tan bed. On examination chest skin was red, blanchable and painful with touch. Which degree of burn does he have?

- (A) First degree burn.
- (B) Second degree burn.
- (C) Third degree burn.
- (D) Fourth degree burn.

(179) A 19-year-old patient victim of a bike accident presented with inability to bring the spoon in front of his mouth to eat. Where is the lesion?

- (A) Temporal lobe.
- (B) Cerebellum.**
- (C) Parietal lobe.
- (D) Occipital lobe.

(180) A patient presented with near complete amputation of the arm due to RTA. On examination; Glasgow coma scale =14. What is the first step of management?

- (A) Secure air way.
- (B) Tourniquet on the arm.**
- (C) Endotracheal intubation.
- (D) Prophylactic antibiotics.

(181) Which of the following is true about burn?

- (A) Fluid replacement should be given 1/2 of fluid in the first 8 hours.
- (B) Fluid replacement should be given 1/4 of fluid in the first 8 hours.
- (C) Second degree need skin graft.
- (D) Acid chemical burns more serious than alkali chemical burns.

(182) What is the most common cause of hand infection?

- (A) Trauma.
- (B) Immunocompromisation.
- (C) Osteomyelitis.
- (D) Animal bites.

(183) A patient with known case of cervical spondylosis presented by paresthesias of the little finger, with atrophy of the hypothenar muscles. By investigations; EMG showed cubital tunnel compression of the ulnar nerve. What is the management?

- (A) Ulnar nerve decompression.
- (B) Steroid injection.
- (C) CT scan of the spine.
- (D) Physiotherapy.

(184) What is the characteristic of arterial injury?

- (A) Dark in color and steady.
- (B) Dark in color and spurting.
- (C) Bright red and steady.
- (D) Bright red and spurting.

(185) A patient presented with deep laceration at the anterior part of the wrist. What is the manifestation?

- (A) Wrist drop.
- (B) Sensory loss only.
- (C) Claw hand.
- (D) Unable to do thumb opposition.

(186) What is the presentation of ulnar nerve injury?

- (A) Claw hand.
- (B) Wrist drop.
- (C) Carpal tunnel syndrome.
- (D) Atrophy of the thenar eminence.

(187) What is the presentation of radial nerve injury?

- (A) Claw hand.**
- (B) Wrist drop.**
- (C) Carpal tunnel syndrome.**
- (D) Atrophy of the thenar eminence.**

(188) A patient presented with hematoma under the nail due to injury. What is the management?

- (A) Acetaminophen only.**
- (B) Wedge resection.**
- (C) Evacuate the hematoma.**
- (D) None of the above.**



(189) A patient presented with ulcer in the leg, as in picture. What is the management?

- (A) Shave biopsy.**
- (B) Elevate the legs and stocking.**
- (C) Topical steroids.**
- (D) Debridement.**



(190) A female patient presented with tender mass below the axilla, with previous history of pores and black heads in that area. What is the management?

- (A) Immediate surgery.**
- (B) Oral antibiotics.**
- (C) Topical antibiotics.**
- (D) Steroid.**

(191) An elderly bedridden male suffer from ulcer in his buttock with size 2x3 cm, which involve muscle. What is the stage of this pressure ulcer?

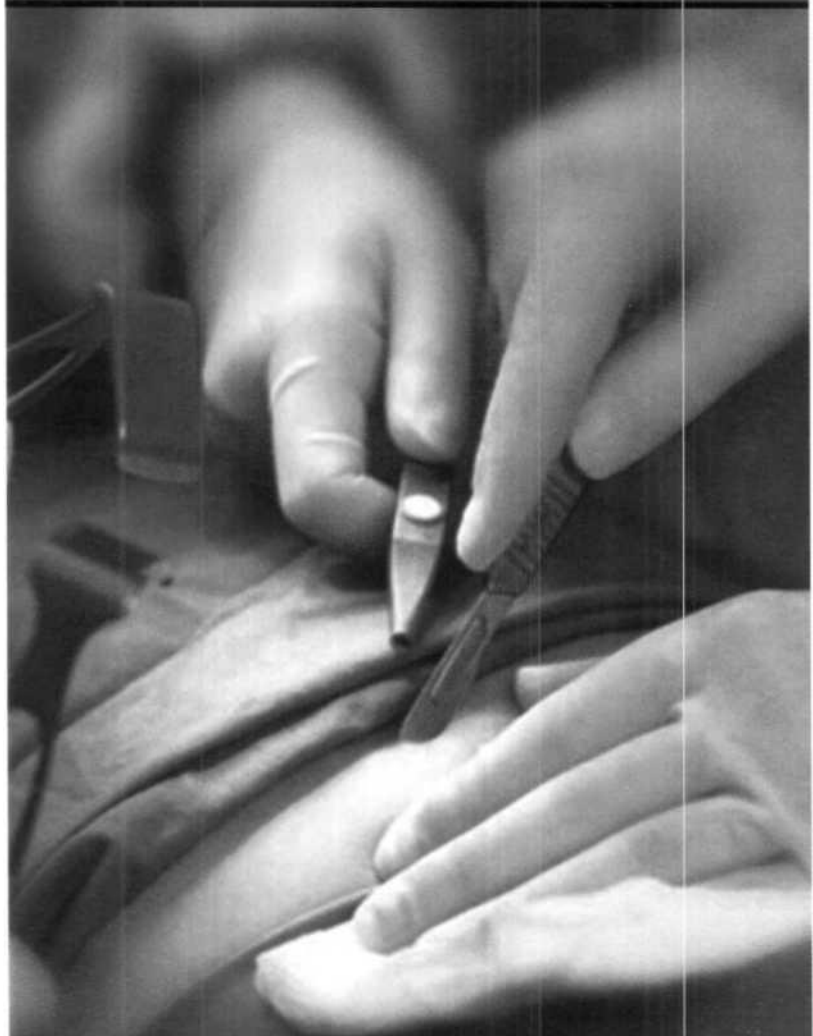
- (A) Stage I.**
- (B) Stage II.**
- (C) Stage III.**
- (D) Stage IV.**

(192) A 26-year-old psychotic patient presented to the hospital after 3 hours of ingestion of 3 pins. On examination; no abnormal detected. By investigations; abdominal x-ray showed 3 pins in small intestine but without intestinal dilation or air fluid level. What is the management?

- (A) Admit the patient for serial x-rays and abdominal examination.**
- (D) Admit the patient for parental antibiotics.**
- (B) Discharge the patient and give him appointment for follow up.**

ANSWERS

GENERAL SURGERY



(1) (A) Superficial to retromandibular vein and external carotid artery.

- From superficial to deep, the structures traversing the parotid gland are arranged: facial nerve and its branches, retromandibular vein and external carotid artery.

(2) (C) Bacterial sialadenitis.

- Bacterial sialadenitis used to be described as a nosocomial postoperative infection associated with a high mortality.

Such reduction in flow may be noted subsequent to dehydration, postoperative states and debilitation.

- Traditionally, bacterial sialadenitis has been a common postoperative complication of surgery related to inadequate hydration.

(3) (A) Surgical resection.

- Surgery is the definitive management of thyroid cancer and various types of operations may be performed.
- Total thyroidectomy is done in patients with papillary carcinoma who are older than 40-year-old and in any patient with bilateral disease.

(4) (B) Excisional biopsy.

- Open (excisional) biopsy has a small chance of infection or bleeding.
- Additionally, there is a moderate risk of nerve injury, localized paralysis, or numbness when the biopsy is performed on a lymph node close to nerves.

(5) (B) Eye drops with saliva replacement.

- This is a case of Sicca syndrome (Sjogren's syndrome), a systemic autoimmune disease in which immune cells attack and destroy the exocrine glands that produce tears and saliva.
- Treatment is generally symptomatic and supportive.
- Moisture replacement therapies such as artificial tears may ease the symptoms of dry eyes.
- NSAIDs may be used to treat musculoskeletal symptoms.

(6) (D) All of the above.

- This is a case of mumps infection.
- Complications of mumps infection are: meningitis or encephalitis (< 10%), deafness, orchitis with lower abdominal pain, fever and chills and possibly epididymitis.
- Less common complications of mumps infection include pancreatitis, myocarditis, arthritis, thyroiditis, deafness and spontaneous abortion.

(7) (A) X-ray.

- X-ray (AP, lateral and oblique intraoral occlusal views) is done initially.
- The most submandibular calculi are radio-opaque (70-80%) but most parotid stones are radiolucent.

(8) (A) Medullary.

- The familial form of medullary carcinoma frequently affects children and young adults.
- Undifferentiated (anaplastic) carcinoma occurs mainly in elderly women and is diagnosed much less often now than in the past.

Follicular carcinoma affects women twice as often as men and relative frequency increases after 40-year-old.

- Lymphoma accounts for less than 1% of all thyroid malignancies and affects mostly women between 50-70-year-old.

(9) (6) Parotid gland.

- Parotid gland is generally soft and not usually palpable as a discrete gland
- The submandibular gland resides just under the inferior border of the mandibular body and is best palpated bimanually with one hand in the lateral floor of the mouth and the other on the submandibular gland.
- A more easily palpable thyroid is in a thin patient with less overriding tissue.
- Normal cervical nodes should be less than one centimeter, movable, discrete, soft and non-tender.

(10) (A) Continue levothyroxine and check after 1-2 months.

- By using levothyroxine, it may take several weeks before the body starts to respond.
- Therapy for hypothyroidism is monitored at approximately 6 weeks intervals until stable.
- During these visits, a blood sample is checked for TSH to determine if the appropriate amount of thyroid replacement is being given.
- The goal is to maintain the TSH within normal limits

(11) (B) Excision biopsy.

This is a case of Leukoplakia, defined as a white/whitish patch or plaque in the mouth that cannot be readily removed (e.g. by rubbing) and not determined to be any other disease.

- Biopsy of all leukoplakia is essential if lesions do not respond to local measures within 2-4 weeks; in many cases an earlier biopsy should be considered.

(12) (A) Euthyroid.

- Thyroid cancer is a malignant neoplasm originating from follicular or parafollicular thyroid cells and usually found in a euthyroid patient, but symptoms of hyperthyroidism or hypothyroidism may be associated with a large or metastatic well-differentiated tumor.

(13) (A) Squamous cell carcinoma.

- All cancers of the head and neck show a strong association with alcohol consumption and tobacco smoking, particularly of cigarettes.
- In fact, tobacco is thought to be implicated in well over 80% of cases of squamous cell carcinoma of the head and neck.

(14) (B) After 3-5 days.

- Different parts of the body heal at different speed.
- Guidelines for suture removal are:
- Face: 3-5 days.
- Extremities: 10 days.
- Joints: 10-14 days.
- Back: 14 days.
- Abdomen: 7 days.

(15) (B) Thyroglossal cyst.

thyroglossal cyst will move upwards with protrusion of the tongue
is almost always on the midline between the isthmus of the thyroid and the hyoid bone or just above the hyoid bone.

It can develop anywhere along a thyroglossal duct though cysts within the tongue or in the floor of the mouth are rare.

usually presents around 5-year-old.

(16) (A) Hashimoto's thyroiditis.

The thyroid gland may become firm, large and lobulated in Hashimoto's thyroiditis, but changes in the thyroid can also be non-palpable.

Enlargement of the thyroid is due to lymphocytic infiltration and fibrosis rather than tissue hypertrophy. Physiologically, antibodies against thyroid peroxidase and/or thyroglobulin cause gradual destruction of follicles in the thyroid gland.

(17) (C) Tuberculous lymphadenitis.

Tuberculous lymphadenitis is matted, painless adenopathy and may be sometimes fluctuant.

- In infectious mononucleosis, multiple and non-tender cervical nodes are present in an adolescent and suggestive of pharyngitis and marked malaise.

In primary bacterial lymphadenitis, it is acute, isolated, tender adenopathy.

(18) (D) Presence of multiple nodules,

if a malignant nodule should be suspected if there

is:

History of childhood head and neck radiation.

Family history of papillary thyroid carcinoma, medullary thyroid carcinoma or multiple endocrine neoplasia type 2.

- Age is less than 20-year-old or more than 70-year-old.

4- Male sex.

5- Abnormal cervical lymphadenopathy.

6- Fixed nodule.

(19) (B) Fine needle biopsy.

Needle biopsy is the most useful diagnostic tool, aside from surgery, for distinguishing benign from malignant thyroid nodules.

(20) (C) Facial injury may cause upper airway injury.

Facial trauma can also be deadly, because it can cause severe bleeding or interference with the airway. Obstruction of the airway may occur due to bleeding, swelling of surrounding tissues, or damage to structures.

Endotracheal intubation is contraindicated.

Cricothyrotomy and tracheostomy can secure an airway.

(21) (C) Tube thoracostomy.

This is a case of tension pneumothorax. Tension pneumothorax is a medical emergency.

Should not waste time trying to establish the diagnosis of tension pneumothorax radiologically because the clinical situation and the physical findings usually strongly suggest the diagnosis.

- A large-bore (14-16 gauge) catheter with needle should be immediately inserted into the pleural space through the second anterior intercostal space.
- The patient should be prepared for immediate tube thoracostomy.

(22) (C) Open the airway and look if there is foreign body.

- The impacted foreign body in the intra-thoracic airway creates a valve like effect that causes more airflow obstruction during expiration than during inspiration; the result is generalized or asymmetric gas trapping.

Signs and symptoms associated with foreign body aspiration occur in 3 phases.

- Stage 1: choking, coughing, gasping and respiratory distress develops because of airway obstruction, choking lasts for a few seconds to several minutes after the episode and may be self-limited.

Stage 2: acute symptoms may be followed by a temporary quiescent phase in which the patient may not have any symptoms.

- Stage 3: during the last phase, symptoms of complications such as infection may develop.

(23) (C) Oblique x-ray view.

- Most rib fractures are better seen on a tangent.
- Posterior and anterior oblique projections are often necessary to detect minimally displaced rib fractures.
- CT scan of the chest for diagnosing rib fractures (or pneumothorax, or hemothorax for that matter) is usually not indicated.

(24) (B) Insert a needle in the second intercostal space in mid clavicular line.

- This is a case of tension pneumothorax.
- Tension pneumothorax implies that the pleural air collection is under positive pressure that is significant enough to cause a marked mediastinal shift away from the affected side.
- Tension pneumothorax remains a life-threatening condition diagnosed under difficult conditions, with a simple emergency procedure as treatment (e.g. needle decompression).
- Tension pneumothorax shows variable findings; respiratory distress and chest pain; tachycardia; ipsilateral air entry on auscultation; breath sounds absent on affected hemithorax; trachea may deviate from affected side; thorax may be hyperresonant; jugular venous distention and/or abdominal distention may be present.
- Treatment starts with early diagnosis and performing needle decompression (needle thoracentesis).
- This is performed on the side of tension pneumothorax with a needle inserted in second intercostal space in mid-clavicular line.
- This procedure punctures through the skin and, possibly, through the pectoralis major muscle, external intercostal, internal intercostal and parietal pleura
- If the procedure just described confirms the diagnosis of a tension pneumothorax, the catheter should be left in place and in communication with the atmosphere until air ceases to exit through the syringe.
- Additional air can be withdrawn from the pleural space with the syringe and the three-way

(25) (D) Endotracheal intubation.

Endotrachea; intubation is the standard of airway management in poorly oxygenated patient

> Endotracheal intubation is indicated for a spontaneously breathing patient, but contraindicated in patients with facial trauma; basilar skull fractures.

Facial airway is usually assessed and is indicated when orotracheal intubation is unsuccessful, occlusion of the airway (by edema, blood) is complete, or the airway is totally transected.

(26) (A) ABCDE.

The primary survey airway, breathing and circulation are assessed and immediate life-threatening problems must be diagnosed and treated

easy-to-remember mnemonic is ABCDE: Airway, Breathing, Circulation, Disability and Exposure/Environment control.

(27) (A) Tube Thoracostomy.

This is a case of hemothorax

The chest x-ray shows a diffuse opacification of the hemithorax through which lung markings can be seen.

Substantial systemic blood loss has occurred hypotension and tachycardia are present respiratory distress. Both pulmonary compromise and hemorrhagic shock. Thoracostomy is the primary mode of management for hemothorax, evacuation of more than 1000 ml of blood immediately after tube thoracostomy, this is considered massive hemothorax

Indications for thoracostomy are usually quoted as immediate drainage of 1000-1500 ml of blood from a hemothorax.

(28) (D) Central line.

Accidental junction complication of central line can quickly evolve into tension pneumothorax with dynamic collapse, especially in patients receiving positive pressure ventilation. Receiving positive-pressure mechanical is also a risk factor for tension pneumothorax.

(29) (A) There is deviation of trachea.

The trachea may be shifted toward the contralateral side if the pneumothorax is large, tactile fremitus is absent. The percussion note is hyperresonant

The breath sounds are reduced or absent on the affected side.

(30) (D) End-tidal carbon dioxide measurement.

End-tidal carbon dioxide detection is the most accurate technology to evaluate endotracheal tube position in patients who have adequate tissue perfusion.

Physical examination methods, such as auscultation of chest and epigastrium visualization of thoracic movement and fogging of the tube are not sufficiently reliable to confirm endotracheal tube placement,

Carotid pulse and chest radiography are not reliable as sole techniques to determine endotracheal tube position

(31) (B) IV fluid.

The first and key part of the assessment of patients presenting with trauma is called the primary survey.

- During this time life-threatening injuries are identified and simultaneously resuscitation has begun.
- An easy-to-remember mnemonic is ABCDE: Airway, Breathing, Circulation, Disability and Exposure/Environment control
- C means (circulation with hemorrhage control) in which 2 large-bore IV lines are established and crystalloid solution may be given.

(32) (A) Flail chest.

- Flail chest is a clinical/radiologic diagnosis noted in blunt trauma patients with paradoxical or reverse motion of a chest wall segment spontaneously occurring
- This clinical finding disappears after intubation with positive pressure ventilation, which occasionally results in a delayed diagnosis of the condition.

(33) (A) Fibroadenoma.

- This is a case of fibroadenoma.
- It is the most common benign tumor of the breast.
- It is the most common breast tumor in women under 40-year-old
- It is usually single
- About 10-15% of women have several lumps that may affect both breasts
- Lumps may be easily moveable under the skin, firm/painless and rubbery

(34) (C) Fine needle aspiration cytology.

- Management of a fibroadenoma in women younger than 30-year-old with breast: US and fine needle biopsy cytology are both correct but fine needle biopsy cytology is the most correct answer.
- Confirmatory tissue biopsy is unnecessary under 21-year-old but is advisable over this age.
- Certainly above 40-year-old there must be complete concordance of the diagnosis on triple assessment if excision is to be avoided.

(35) (C) Radical mastectomy is the choice of surgery.

- Radical mastectomy is not done anymore.
- Removes all breast tissue, skin, pectoralis muscles and axillary lymph nodes.

(36) (B) Menopause before 40-year-old.

- It has long been known that nulliparous women are at greater risk of breast cancer.
- A first full-term pregnancy delayed until 35-year-old further increases the risk.
- The interval between menarche and menopause is known as the estrogen window and is a measure of cumulative exposure to endogenous estrogen; the longer this interval, the higher the breast cancer risk.
- A natural or a medically induced menopause under 40-year-old reduces breast cancer risk by 2/3.

(37) (C) Reassure the patient that this lump is a cyst and reassess her in 4 weeks.

Most cysts are solitary cysts or small collection of cysts can be aspirated.

These resolve completely and if the fluid is not bloodstained no further treatment is required.

3% will recur and require reaspiration.

Cytological examination of cyst fluid is no longer practiced routinely.

There is a residual lump or if the fluid is bloodstained a local excision for histological diagnosis is advisable as is also the case if the cyst repeatedly recurs.

(38) (A) Throw the fluid away.

Most benign cyst fluids are yellow or green and does not need to be analyzed in laboratory

Studies of breast fluid from thousands of women show that analysis of fluid is important only when there is previous bleeding.

(39) (A) Increases the survival of node-positive pre-menopausal women.

Adjuvant chemotherapy gives greater benefit pre-menopausal women

under 50-year-old with estrogen receptor negative tumors chemotherapy gives

10% reduction in relapse rates of 26-44%

in women over 50 years of age with equivalent odds reduction 10-18%.

Adjuvant chemotherapy is currently recommended for most premenopausal women shown to have

grade 2 axillary nodal spread but with no evidence of distant metastases. Treatment in

premenopausal women gives an average proportional increase in survival of approximately

relative node status.

Adjuvant chemotherapy is used less frequently in node-negative patients and in postmenopausal women, but the absolute benefits are less

Pre-menopausal women with node-positive breast cancer have improved survival rate with the use of adjuvant chemotherapy.

(40) (B) Breastfeeding.

Bacterial mastitis is the commonest variety of mastitis and nearly always commences acutely.

Associated with lactation in the majority of cases.

(41) (A) Fat necrosis.

Trauma to the breast can produce an area of fat necrosis that may mimic carcinoma clinically and radiologically.

There is typically an injury causing bruising, followed a few weeks later by lump.

This produces a hard irregular painless lump which may have skin dimpling and nipple retraction.

Mammography may show a stellate area of distortion with calcification.

Core biopsy distinguishes fat necrosis from carcinoma

(42) (D) All of the above.

Hyperplasia of the breasts occurs sporadically in otherwise healthy girls at puberty and much less often during the first pregnancy.

It may reach enormous dimensions and may reach the knees when the patient is sitting this is due to

which is apparently due to an alteration in the mechanical sensitivity of the breast to

hormonal stimulation.

Phyllodes tumor is a large sometimes massive tumor.

- Giant fibroadenomas occur occasionally during puberty; they are over 5 cm in diameter and are often rapidly growing.

(43) (A) Mammography.

- Because skin changes may be due to:
 - Carcinoma beneath skin causes dimpling, puckering, or color changes.
- Late presentation may be with skin ulceration or fungation of the carcinoma through the skin.
- Lymphoedema of the skin (peau d'orange) suggests local lymph node involvement.
- Mammography usual particularly over 35-year-old.
- US sometimes used under 35-year-old because increased tissue density reduces the sensitivity and specificity of mammography, so US is particularly useful in young women.

(44) (A) Fibroadenoma.

- Fibroadenomas are most common between 15-30-year-old.
- Fibroadenomas are occasionally multiple and bilateral
- Fibrocystic change is most common between 35-45-year-old.
- Carcinoma of the breast is extremely rare below 20-year-old and the patient has no family history of breast cancer.

(45) (A) US.

- A clinical breast exam often cannot tell the difference between a cyst and a solid mass, so an US is needed to be sure.
- Fine needle biopsy biopsy can confirm the diagnosis of a cyst and at the same time drain the cyst fluid.

(46) (B) Hormonal treatment with danazol.

- This is case of fibrocystic change.
- Fibrocystic change (fibroadenosis) presents as either a single lump or areas of lumpiness which are painful and tender premenstrually (e.g. cyclically).
- Fibrocystic change is most common between 35-45-year-old.
- Managing fibrocystic change; once the patient has been reassured she does not have cancer, the symptoms of pain and tenderness associated with fibrocystic change can be treated.
- Gamolenic acid relieves mild to moderate symptoms in more than half of the patients.
- For those with moderate to severe cyclical pain, danazol r bromocriptine offers relief in 70% of women.

(47) (A) Breast cancer.

- Elevated concentrations of CA-125 are associated with malignant tumors of the pancreas, breast, lung, colon and ovary.
- Menstruation and benign conditions such as endometriosis, pelvic inf lammatory disease and liver disease can also be associated with elevated concentrations of CA-125.

(48) (A) Breast cancer.

- A case of noncydical mastalgia with nodule mostly it is due to underlying breast cancer.

For noncydical mastalgia it is important to exclude extramammary causes such as chest wail pain and it may be necessary to carry out a biopsy on a very localized tender area which might be harboring a subdinical cancer.

(49) (A) Cystic lesion with serous fluid that does not refill again.

It is a case of a simple cystic breast lesion.

Most small cystic lesions can be aspirated.

They resolve spontaneously. If fluid is not bloody and further treatment is required, need a repeat ultrasound for follow up.

(50) (D) Follow up in 6 months.

Even if aspirated, no further treatment or investigations are required, and it is no longer practiced routinely.

- If there is a residual lump or if the fluid is blood stained, a local excision for histological diagnosis is advisable.

For a woman over 35 years old, she needs mammography.

(51) (A) Fibrocystic changes.

Fibrocystic disease symptoms include lumpy breast, swelling, tenderness or pain which tend to

get worse before and after menstruation.

These changes are common in women of childbearing age but they can affect women of any age. It is a benign condition of the breasts.

It may be in different parts of the breast and in both breasts at the same time.

(52) (A) 6-7 days after cycle begin.

It is usually one week after menstruation begins.

(53) (A) Intraductal papilloma.

Bloody discharge may be caused by duct ectasia or a duct papilloma or carcinoma.

Intraductal papilloma is the commonest cause of bloody discharge and sometimes associated with cystic

swelling beneath the areola.

Other clinical features or duct ectasia are nipple discharge of any color, a subareolar mass, abscess, mammary fistula and/or nipple retraction are the commonest symptoms.

(54) (A) Fine needle biopsy with cytology.

It is a case of fibroadenoma (fibrocystic disease) because of bilateral cyclical nodularity.

Fine needle biopsy with cytology should be done to exclude cancer.

(55) (B) Number of lymph nodes involvement.

These factors have been identified for predicting risk of recurrence in patients with breast cancer.

But axillary nodal status is the most significant prognostic indicator for patients with early-stage breast cancer, in the presence or absence of axillary lymph node involvement.

Furthermore, there is a direct relationship between the number of involved axillary nodes and the risk for distant recurrence.

(56) (C) Fine needle biopsy.

It is a case of fibroadenoma.

There is no sign of breast cancer.

The appropriate minimal diagnostic procedure for identification of a palpable breast mass is fine needle aspiration.

Fine needle biopsy done to exclude cancer and relieve the patient.

(57) (B) The treatment of choice for stage I disease is modified mastectomy without radiotherapy.

- Stage 1 is less than 2 cm without lymph node involvement and no metastasis so the treatment is breast conservative surgery.
- Hormonal therapy only benefits patients with estrogen receptor positive tumors and reduces mortality up to 36%.
- Hormonal therapy gives the greatest benefit to the post-menopausal women
- The effect of tamoxifen is favorable in most cases except for estrogen receptor-negative premenopausal women. Postmenopausal women with estrogen receptor-rich (positive) tumors achieve a greater reduction in the relative risk of relapse than estrogen receptor-negative cases
- Tamoxifen reduces the risk of recurrence by 50%.
- Radiotherapy to the breast improves loco-regional control after breast conserving surgery and reduces tumor recurrence by 65%; it is also believed to reduce mortality from distant metastases by up to 5%.
- It is conventional to combine conservative surgery with radiotherapy to the remaining breast tissue.

(58) (B) Lobular carcinoma.

- Lobular carcinoma has a substantially increased propensity for multifocal and multicentric distribution and occurs bilaterally.

(59) (B) Self-examination and mammogram are complementary.

- This depends mainly on the age of the patient.
- Mammogram is the screening and diagnostic tool used to detect early disease.
- Self-examination is also can detect tumor at an early stage and show better outcome.
- So, each of the above procedures is complementary to the others.

(60) (C) Monthly.

- Self-examination of breast recommended monthly.
- Age between 20-40-year-old: every 2-3 years by a physician.
- Age more than 40-year-old: annual breast examination by physician.

(61) (B) Comatose patient with hypotension and abdominal distention.

- Most important indication is unexplained shock which occurs with hypotension.

(62) (C) Metronidazole.

- The infectious organism is *Bacteroides fragilis*.
- Metronidazole is the best and effective antibiotic, because *Bacteroides fragilis* is anaerobic.
- Or combination of beta-lactamase inhibitors (e.g. clavulanic acid, sulbactam, tazobactam) with a beta-lactam antibiotic (e.g. ampicillin, amoxicillin).
- Gentamicin is ineffective against it.

(63) (B) Hypovolemic shock.

- Hypovolemic shock refers to a medical or surgical condition in which rapid fluid loss results in multiple organ failure due to inadequate circulating volume and subsequent inadequate perfusion.

(64) (A) Laparotomy with evacuation of the hematoma.

- Intramural hematoma formation in the aorta is a step along the continuum to aortic dissection.
- So, surgical management is better.

(65) (C) Arrange for a contrast enhanced CT.

is a case of patient with penetrating stab injury to the anterior abdominal wall with omental laceration and stable vitals.

Unequivocal indications for laparotomy are: hypotension, bleeding viscera protrusion (omentum excluded), peritonitis suspected injury of gastrointestinal tract, however can avoid laparotomy in this patient, so contrast enhanced CT can be considered as the next step in management.

If injury is detected on contrast enhanced CT, laparotomy is indicated

(66) (A) Amoebic liver abscess.

is a case of amoebic liver abscess which is most commonly located in the superior-anterior aspect of the right lobe of the liver near the diaphragm and has a necrotic central portion that contains a thick, reddish brown pus-like *materia*

This material has been likened to anchovy paste or chocolate sauce.

Amoebic abscesses are the most common type of liver abscesses worldwide.

Amoebiasis should be considered in patients who have traveled to an endemic area and presents with right upper quadrant pain, fever, hepatomegaly and hepatic abscess. Leukocytosis is common, whereas elevated transaminase levels and jaundice are unusual.

The most common biochemical abnormality is a mildly elevated alkaline phosphatase level.

Even though this disease process is secondary to a colonic infection, the presence of diarrhea is unusual. Most serological tests of the fluorescent antibody test for *Entamoeba histolytica* are positive and results are mainly positive for some time after a clinical cure.

Antibodies are usually present if the serological test results are negative.

(67) (A) Acute pancreatitis.

is a case of acute pancreatitis because Grey-Turner's sign and Cullen's sign are signs of acute pancreatitis.

clinical features of acute pancreatitis include epigastric pain

radiating to the back.

2 Severe nausea and vomiting.

fever, dehydration, hypotension, tachycardia may be frankly shocked

epigastric tenderness associated with guarding and in severe cases, rigidity, which may be generalized. Flank ecchymosis Grey-Turner's sign and periumbilical ecchymosis Cullen's sign in 1-3% of acute hemorrhagic pancreatitis.

(68) (B) Gastric outlet obstruction.

is a case of gastric outlet obstruction which most commonly occurs as a result of peptic ulceration, or neoplasia, the pyloric regions

epigastric outlet obstruction results from viscera distention and usually is relatively mild. In a significant number of fullness and distress in the epigastric. In the early stage nausea and vomiting are prominent features - The vomitus usually is free of bile, but it may contain recently ingested food or be stained by blood.

(69) (C) History and upper gastrointestinal endoscopy.

In the majority of cases the diagnosis is assumed rather than proven. Initial treatment is empirical. Endoscopy is done mainly to exclude more serious pathology such as cancer.

patients with persistent symptoms in whom it is judged that an objective diagnosis is

oesophago-manometry and 24-hour oesophageal pH recording should be done.

- It is essential to have an objective diagnosis before embarking on an anti-reflux operation.

(70) (A) Abdominal US.

- Acute cholecystitis is commonly evaluated by US and sometimes is found on CT scan.

(71) (A) Adenocarcinoma.

- Complications of gastroesophageal reflux disease, such as Barrett's esophagus and esophageal stricture.
- Barrett esophagus: is a condition in which the normal squamous epithelium of the esophagus is partially replaced by metaplastic columnar epithelium, placing patients at risk for developing adenocarcinoma.

(72) (B) 500 WBCs is diagnostic.

- A positive diagnostic peritoneal lavage in an adult classically requires one of the following results:
 - 1- 10 ml gross blood on initial aspiration.
 - 2- More than 500/mm³ WBCs.
 - 3- More than 100,000/mm³ RBCs.
 - 4- Presence of enteric/vegetable matter.

(73) (A) Diffuse esophageal spasm.

- The diseases which show a corkscrew appearance in an image are the following diseases:
 - 1- Volvulus.
 - 2- Buerger disease (thromboangiitis obliterans).
 - 3- Diffuse esophageal spasm.

(74) (B) Intestinal decompression by nasogastric tube with IV isotonic fluid.

- This is a case of intestinal obstruction.
- Treatment of intestinal obstruction includes resuscitation with IV fluid, nasogastric tube decompression and placement of a urinary catheter to monitor urine output.
- Abdominal exploration is performed in patients with peritoneal signs, leukocytosis, fever, or failure of resolution of obstructive symptoms.

(75) (B) Pancreatic pseudocyst.

- The most common complication of pancreatitis is the development of an acute fluid collection in the peripancreatic area which is called pseudocyst.

(76) (A) Subphrenic abscess.

- Subphrenic abscess is a disease characterized by an accumulation of infected fluid between the diaphragm, the liver and the spleen.
- This abscess develops after surgical operations for bowel perforation.

(77) (A) Cholecystectomy.

- Early laparoscopic cholecystectomy is indicated once the diagnosis of acute cholecystitis is confirmed and the patient is hemodynamically stable.
- Cholecystectomy following the diagnosis of asymptomatic gallstones in patients with sickle cell disease is therefore advisable.

(78) (A) Cancer of the head of the pancreas.

The presence of jaundice and a painlessly distended palpable, non-tender gallbladder (Courvoisier's sign), or migratory thrombophlebitis (Trousseau's sign) as strongly indicative of pancreatic cancer and may be used to distinguish pancreatic cancer from gallstones.

- Pancreatic cancer presents with abdominal pain radiating toward the back, as well as with jaundice, loss of appetite, nausea, vomiting, weight loss, weakness, fatigue and indigestion.

Diagnosed by CT.

Characteristic of pancreatic cancer is late diagnosis due to metastasis at diagnosis.

(79) (C) Acute appendicitis.

- A patient with acute appendicitis usually presents with dull periumbilical pain lasting 1-12 hours that becomes sharp, right lower quadrant pain at McBurney's point, presents with nausea, vomiting, anorexia and low-grade fever, positive obturator and Rovsing's signs. A negative insensitizing test may be positive.

(80) (A) Mechanical obstruction of small intestine.

- The most common causes of a mechanical small bowel obstruction are adhesions related to prior surgery (60%).

Other causes of obstruction associated with subsequent small bowel obstruction include appendectomy, colorectal surgery and gynecologic surgery.

Physical signs: abdominal pain, distension, nausea, vomiting, anorexia, and bowel sounds are hyperactive and high-pitched.

(81) (A) Neutrophils in the muscularis propria.

- The definitive diagnosis of appendicitis is based on pathology. The histological findings of appendicitis are neutrophils in the muscularis propria.

(82) (A) WBCs and neutrophils count.

- WBCs and CRP individually and together had a high sensitivity to differentiate patients with and without appendicitis.

(83) (D) Between 19-25-year-old.

- The peak incidence of acute appendicitis is in the teens and early twenties (second and third decades).

(84) (D) Has decreased in frequency during the past 20 years.

There has been a decrease in the frequency of appendicitis which may be related to changes in cellular fiber intake.

- In fact, the higher incidence of appendicitis is believed to be related to poor fiber intake in such countries.

(85) (B) 4:1,000.

- The mortality and morbidity are related to the stage of disease and increase in cases of perforation.
- As stated above, the average rate of perforation is between 16-30%, but is significantly increased in elderly people and young children, in whom the rate can be up to 97%, usually because of a delay in diagnosis.

(86) (B) Admission and observation.

The clinical presentation of appendicitis is notoriously inconsistent.

- The classic history of anorexia and periumbilical pain followed by nausea, right lower quadrant pain and vomiting occurs in only 50% of cases
- The ER clinician must evaluate the larger group of patients who present to the ER with abdominal pain of all etiologies with goal of approaching 100% sensitivity for the diagnosis in a time- cost- and consultation-efficient manner.

(87) (B) Pain improving with sitting and leaning forward.

- Patients in appendicitis usually lie down flex their hips and draw their knees up to reduce movements and to avoid worsening their pain.
- Later, a worsening progressive pain along with vomiting, nausea and anorexia are described by the patient
- Usually, a fever is not present at this stage.

(88) (D) Tenderness at right lower quadrant of the abdomen with rebound tenderness.

The classic symptoms of acute appendicitis are periumbilical pain followed by nausea right lower quadrant pain and vomiting occurs in only 50% of cases in appendicitis The most common symptom of appendicitis is abdominal pain

(89) (B) Rupture is common.

- Appendicitis is a less common cause of abdominal pain in elderly patients than in younger patients but the incidence among elderly patients appears to be rising because 75% of elderly patients wait more than 24 hours to seek medical attention

- The diagnosis can be difficult for the elderly make, because more than one half of patients in this age group do not present with fever or leukocytosis.

Further making the diagnosis difficult, approximately one third of the elderly patients do not localize pain to the right lower quadrant and one fourth does not have appreciable right lower quadrant tenderness

- Only 20% of elderly patients present with anorexia, fever, right lower quadrant pain and leukocytosis
- The initial diagnosis is incorrect in 40-50% of patients in age range.
- Perforation is the most common complication of appendicitis in elderly.

- The rate of perforation in elderly patients is approximately 50%, which is 5 times higher than in younger adults.

- Only approximately 10% of cases of acute appendicitis occur in patients older than 60-year-old whereas one half of all deaths from appendicitis occur in this age group.

(90) (C) May cause intestinal obstruction.

- The most common complications in pediatric appendicitis are wound infections (3-10%) and intra-abdominal abscesses; both of which are more common after perforation

- Perforation and abscess formation can also lead to fistula formation in adjacent organs.
- Patients with advanced appendicitis can progress to sepsis and multisystem organ failure.

Other potential complications include postoperative diffuse peritonitis, portal vein pyelephlebitis, rare; and adhesive small bowel obstruction.

Plain films are most helpful in a patient with suspected caecal appendicitis in which small bowel obstruction or free air is suspected.

(91) (A) Cefoxitin.

Antibiotics should be administered before every appendectomy when the patient becomes afebrile and WBCs count normalizes, antibiotic treatment may be stopped. Cefotetan and cefoxitin seem to be the best antibiotics.

A large meta-analysis has demonstrated the efficacy of preoperative antibiotics in lowering the serious complications in appendicitis.

Most surgeons routinely administer antibiotics to all patients with suspected appendicitis.

If simple appendicitis is encountered, there is no benefit in extending antibiotic coverage beyond 24 hours. If perforated or gangrenous appendicitis is found, antibiotics should be continued until the patient is afebrile and has a normal WBC count.

Intra-abdominal infections of gastrointestinal tract origin that are of mild to moderate severity, recommended single-agent therapy is cefoxitin, cefotetan, or ticarcillin-clavulanic acid; more severe infections, single-agent therapy with carbapenems or combination therapy with third-generation cephalosporin, monobactam, or aminoglycoside plus anaerobic coverage with clindamycin or metronidazole is indicated; recommendations are similar for children.

(92) (A) Elective surgery.

(93) (A) Elective surgery if it is reducible.

(94) (B) Superior lateral (anterolateral).

(95) (B) Indirect inguinal hernia.

Indirect hernia: protrusion of abdominal contents through the internal and then external inguinal rings.

Eventually to the scrotum (in males), most common due to a congenital patent processus vaginalis. Direct inguinal hernia increases in size and becomes apparent when the patient coughs and strains until reduced.

Indirect hernia: herniation of abdominal contents through the floor of Hesselbach's triangle. Hesselbach's triangle is an area bounded by the inguinal ligament, inferior epigastric artery and rectus abdominis.

Direct hernial sac contents do not traverse the internal inguinal ring; they herniate directly through the abdominal wall and are contained within the aponeurosis of the external oblique muscle.

Most due to an acquired defect in the transversalis fascia from mechanical breakdown that increases with age.

Valsalva maneuver: forcibly exhale while keeping the mouth and nose closed, varicocele: there will be visible or palpable enlarged vein.

(96) (B) Every 12 months.

Full colonoscopy before or after surgery to look for polyps or other cancers that were not seen previously.

Colonoscopy is usually repeated one year after surgery and if this is normal, then every 3-5 years thereafter.

- If polyps or new cancers are found, this schedule may be adjusted.

(97) (A) More than 90%.

Stage I colon cancers have spread beyond the inner lining of the colon to the second and third layers and involves the inside wall of the colon.

- The cancer has not spread to the outer 'vail of the colon or outside the colon.
- Standard treatment involves surgery to remove the cancer and a small amount of tissue around the tumor.
- Additional treatments are not usually needed.
- Aggressive surgery to remove all of the cancer offers a great potential for cure.
- The five-year survival rate for stage I is 93%

(98) (A) It is sensitive to chemotherapy.

- Adjuvant chemotherapy is used in cases of lymph node positive colon cancers.

(99) (B) Removal of obstructed colon part.

- The patient has a large bowel obstruction
- The obstruction can be relieved with a gastrografenema or colonoscopy- however, surgery is usually required.
- Ischemic colon usually requires partial colectomy with a diverting colostomy.
- Treat the underlying cause (e.g. neoplasm).

(100) (A) As soon as possible.

- Chemotherapy used after surgery to remove the cancer is known as adjuvant chemotherapy.
- It can help to keep the cancer from coming back later and has been shown to help people with stage II and stage III colon cancer as well as rectal cancer with increased survival.
- It is given after all visible cancer tissue has been removed by surgery
- Adjuvant chemotherapy works by killing the small number of cancer cells that may have been left behind at surgery because they were too small to see.
- Adjuvant chemotherapy is also aimed at killing cancer cells that might have escaped from the main tumor and settled in other parts of the body (but are too small to see on imaging tests).

(101) (A) Familial adenomatous polyposis.

- Patients with familial adenomatous polyposis, 75-80% have a family history of polyps and/or colorectal cancer at 40-year-old or younger

(102) (B) Intestinal obstruction.

- The most common complication of Crohn's disease, occurring in 30-50% of patients, is small bowel obstruction.
- Typically, it is due to intestinal strictures from repeated bouts of inflammation and subsequent fibrosis.
- For a complete obstruction or a partial one which is refractory to nonsurgical management, surgical intervention is required.
- Surgical options include resection of the strictured bowel and strictureplasty.
- For long (more than 12 cm) strictures or multiple strictures in close proximity, surgical

(103) (D) Folic acid.

- A prospective cohort study observed that higher energy-adjusted folate intake in the form of multivitamins containing folic acid was related to a lower risk for colon cancer, as is obtained from green leafy vegetables. Legumes, nut and some fortified grains as bread, cereal and flour are also excellent sources.

(104) (B) Staging.

After resection; seems successful, colorectal cancer management depends on the stage of the cancer before treatment.

(105) (C) Rice.

The only treatment for celiac disease is to eat a gluten-free diet. There are plenty of foods that are naturally gluten-free, including fruits, vegetables, beef, poultry, fish, eggs and more. Wheat and corn have generally been considered safe grains for celiac patients.

(106) (C) Total colectomy.

Ulcerative colitis is a mucosal inflammatory disease confined to the rectum and colon, can thus be cured by total proctocolectomy. For that reason, a standard of therapy for many years was total proctocolectomy and ileostomy, but total proctocolectomy is often curative, alleviating symptoms and removing the risk of colon cancer.

(107) (A) No lymph node metastases.

Stage EEB is T4a, NO, M0: the cancer has grown through the wall of the colon or rectum but has not grown into other nearby tissues or organs, it has not yet spread to the nearby lymph nodes or distant sites, stage B is tumor infiltrating through muscle.

(108) (A) Start antibiotics.

This is a case of diverticulitis. Patients with mild diverticulitis, typically with Hinchey's stage I disease, can be treated with the following outpatient regimen: a clear liquid diet and 7-10 days of oral broad-spectrum antimicrobial therapy. Patients can advance the diet slowly as tolerated after clinical improvement occurs, which should be within 48-72 hours.

(109) (A) Curative.

Standard treatment option for stage II colon cancer is wide surgical resection and anastomosis.

(110) (C) CT.

CT scan of the abdomen and pelvis is the most helpful test to confirm the suspected diagnosis of diverticulitis.

(111) (A) Colonoscopy.

The most likely diagnosis of this case is colon cancer, colonoscopy is the most effective way to diagnose colon cancer.

- During colonoscopy precancerous and cancerous growths throughout the colon can be found and either removed or biopsied, including growths in the upper part of the colon, where they would be missed by sigmoidoscopy.
- However, it is not yet known for certain whether colonoscopy can help reduce the number of deaths from colorectal cancer.

(112) (A) Acute prostatitis.

- Prostatitis is an infection or inflammation of the prostate gland that presents as several syndromes with varying clinical features.
- Acute bacterial prostatitis presents with urinary frequency, urgency, perineal pain or fullness and dysuria plus a fever.
- Prostatic massage should not be performed to avoid bacteremia.
- On rectal examination there is tender, nodular, hot, boggy, or normal-feeling gland.
- Also suprapubic abdominal tenderness and enlarged tender bladder due to urinary retention can be found.

(113) (C) Cystoscopy.

- The evaluation of gross hematuria requires a complete history and physical examination.
- Urinalysis is a critical component of the workup of gross hematuria and should be the initial test.
- It is important that a fresh, midstream, clean-catch or catheterized urine specimen be collected.
- Imaging of the upper urinary tract, by IV urography or CT urography must follow laboratory testing.
- Finally, referral to a urologist for cystoscopy is necessary to determine the pathology of the lower urinary tract.

(114) (A) Pyelonephritis.

- The classic presentation in acute pyelonephritis is the triad of fever, costovertebral angle pain and nausea and/or vomiting.
- These may not all be present, or they may not occur together temporally.
- Symptoms may be minimal to severe and usually develop over hours or over the course of a day.
- Infrequently, symptoms develop over several days and may even be present for a few weeks before the patient seeks medical care.
- Symptoms of cystitis may or may not be present to varying degrees.
- These may include urinary frequency, hesitancy, lower abdominal pain and urgency.

(115) (B) Dark field microscopy.

- This is a case of primary syphilis.
- A diagnosis of primary syphilis is based on clinical presentation, dark field microscopy and serology.
- Positive dark field microscopy findings rule the diagnosis, but this technique has limited accuracy.
- Non-treponemal test results, such as the rapid plasma reagin test, will be positive 4-6 weeks after infection or 1-3 weeks after the chancre appears.
- Treponemal antigen tests (e.g. microhemagglutination assay. *Treponema pallidum*, enzyme

(116) (B) Supra-pubic catheter.

The traditional intervention for *men* with posterior urethral injury secondary to pelvic fracture is cement of a suprapubic catheter for bladder drainage and subsequent delayed repair.

This is the safest approach because it establishes urinary drainage and does not require either urethral manipulation or entrance into the hematoma caused by the fracture of the pelvis.

This allows a formal repair to be carried out several weeks later under controlled circumstances and after resolution of the hematoma.

The suprapubic catheter can be safely placed either percutaneously or via an open approach with a small incision.

(117) (A) Hematuria.

The most common presentations include hematuria (40%), flank pain (35%) and a palpable mass in the flank or abdomen (25%).

Other signs and symptoms include weight loss (33%), fever (20%), hypertension (20%), hypercalcemia, night sweats, malaise and a varicocele, usually left sided, due to obstruction of the testicular vein of males).

(118) (B) Refer to urologist

This is a case of testicular torsion

Testicular torsion is a true urologic emergency and must be differentiated from other complaints of testicular pain because a delay in diagnosis and management can lead to loss of the testicle. The diagnosis of torsion is suspected on clinical grounds, early urologic consultation is mandatory and definitive treatment is surgery for detorsion and orchiopexy or possible orchiectomy.

(119) (B) Voiding cystogram.

The traditional radiographic evaluation after a first urinary tract infection aims to screen for contralateral reflux, obstruction of the upper urinary tract and urethral abnormalities to protect the kidneys from damage.

Although voiding cystourethrogram is the only study that can provide correct diagnosis of vesicoureteral reflux, consensus is lacking on whether putting a child through this potentially traumatic experience is absolutely necessary.

Emerging evidence suggests that it may be avoided in some cases, replaced by a dimercaptosuccinic acid scan.

Ultrasonic renal scans show promise in identifying patients with acute or pre-existing damage and may be used to tailor the need for voiding cystourethrogram or urinary prophylaxis.

(120) (A) Repeat urine analysis for blood and protein.

In the case of isolated asymptomatic microscopic hematuria (no proteinuria, edema, hypertension, gross hematuria), a positive urinalysis should be confirmed with at least 2 more repeated urinalyses over the next weeks to months, prior to pursuing more aggressive evaluation, as defines persistent microscopic hematuria.

(121) (B) Start on medication (alpha-blocker).

Most patients with benign prostatic hyperplasia do not present with obvious surgical indications;

instead, often have milder lower urinary tract symptoms and, therefore, are initially treated with medical

therapy.

- A significant component of lower urinary tract symptoms secondary to benign prostatic hyperplasia is believed to be related to the smooth-muscle tension in the prostate stroma, urethra and bladder neck.
- The smooth-muscle tension is mediated by the alpha-1-adrenergic receptors; therefore, alpha-adrenergic receptor-blocking agents should theoretically decrease resistance along the bladder neck, prostate and urethra by relaxing the smooth muscle and allowing passage of urine.

(122) (C) Polycystic kidney disease.

- Autosomal dominant polycystic kidney disease is a multisystemic and progressive disorder characterized by the formation and enlargement of cysts in the kidney and other organs (liver, pancreas, spleen).
- Clinical features usually begin in the 3rd-4th decade of life, but cysts may be detectable in childhood and in utero.

(123) (B) US.

- Scrotal masses are best categorized by their anatomic origin.
- Because the anatomy, the scrotum is easy to appreciate on physical examination; identifying normal anatomy by inspection and palpation usually leads to an accurate differential diagnosis of most scrotal masses.
- For the swollen testis, US usually demonstrates normal parenchyma in cases of torsion and orchitis and a heterogeneous appearance in carcinoma.

(124) (A) Varicocele.

- Varicocele is the formation of a venous varicosity in the spermatic vein.
- The left testicle has an increased incidence because of anatomical factors.
- Clinical features: a chronic non-tender mass that does not transilluminate usually on the left side.
- It feels like a bag of worms and increases in size with Valsalva maneuver and decrease in size with elevation of the scrotum or supine position.

(125) (B) Prostatic hypertrophy.

- Hydronephrosis/hydroureter caused by obstruction anywhere in the urinary tract may be acute or chronic, unilateral or bilateral.
- The major causes range from anatomic abnormalities such as urethral valves or stricture and stenosis at the ureterovesical or ureteropelvic junction, which account for the majority of cases in children.
- In comparison, calculi are most common in young adults, while prostatic hypertrophy or carcinoma, retroperitoneal or pelvic neoplasms and calculi are the primary causes in older patients.

(126) (A) Nitrates.

- Sildenafil (Viagra) is the most effective oral therapy currently available for erectile dysfunction.
- Patients should be given clear instructions regarding the use of sildenafil.
- The most common side effects include flushing, headaches, dyspepsia and transient visual changes.
- In combination with nitrates, it can and has caused fatal hypotension.
- It should not be prescribed to patients on nitrates.
- Additionally, nitrates should not be administered to anyone who has recently ingested sildenafil.

(127) (B) Need surgery at 6-18-month-old.

Hydroorchidism should be treated when the patient is aged appropriately. Current month-old is age recommendation is not pushed over recent decades and is based on the rarity of spontaneous descent after 6-month-old - The possible improvement in fertility thereafter; even though it may be controversial.

(128) (A) He needs immediate surgical operation.

For congenital undescended testis should be treated surgically no later than at 9-15-month-old. The anesthesia by pediatric anesthesiologist, surgical correction at this time is appropriate, because spontaneous descent of the testis will not occur after 1-year-old - In most cases, the testis can be lowered with an orchiopexy.

(129) (B) Overflow incontinence.

- The major contributing factor to overflow incontinence is incomplete bladder emptying secondary to detrusor contractility or bladder outlet obstruction!
 - Impaired detrusor contractility is typically neurogenic in nature and underlying causes include diabetes mellitus, lumbosacral nerve disease from tumors, meningomyelocele, multiple sclerosis, prolapsed intervertebral discs, and high spinal cord injuries.
 - In most cases, both sensory and motor neuropathies are present.
 - The maximal storage capacity of the bladder is reached, often times without the individual realizing that this has occurred.
- Incontinence occurs off the top of a chronically overfilled bladder.
- Effective emptying is not possible because of a contractile detrusor muscle.

(130) (C) Urine culture.

- Primary nocturnal *enuresis is caused by* a disparity between bladder capacity and nocturnal urine production and failure of the child to wake up in response to a full bladder.
 - Less commonly, enuresis is secondary to a medical, psychological, or behavioral problem.
 - A diagnosis usually can be made with a history focusing on enuresis and a physical examination followed by urinalysis before initiation of treatment; imaging and urodynamic studies are rarely needed.
- Urinalysis urine culture detects urinary tract infection on diabetes > tell testes insipidus

(131) (A) Epididymo-orchitis.

- In almost all cases are due to an infection.
- Bacteria that cause urine infections such as E. coli can sometimes track down the vas deferens to cause an epididymo-orchitis, which can happen at any age and is the most common cause of epididymo-orchitis in men over 16 years old.
- In men, as the urine flow becomes more common with increasing age, due to enlarged prostate or urethral stricture narrowing of the urethra) tial, they are more prone to develop urine infection.
 - Infection is also the usual cause of epididymo-orchitis in young boys.
 - Epididymo-orchitis occur with urinary tract infection and urinary retention.
 - Testicular torsion: sudden acute severe testicular pain with elevated transverse lying testes.

(132) (B) Empty urinary bladder by Foley catheter and tell him to come back to clinic.

- Acinary retent should be managed by immediate and complete decompression of the bladder through catheterization

Standard transurethral catheters are readily available and can usually be easily inserted.

- If urethral catheterization is unsuccessful or contraindicated the patient should be referred immediately to a physician trained in advanced catheterization techniques such as placement of a firm, angulated

Coude catheter or a suprapubic catheter.

(133) (A) Renal cell carcinoma.

Hematuria particularly in the adult should be regarded as a symptom of malignancy until proved otherwise and demands immediate urologic examination

- In a patient who presents with gross hematuria, cystoscopy should be performed as soon as possible, because frequently the source of bleeding can be readily identified.

- Cystoscopy will determine whether the hematuria is coming from the ureter, or upper urinary tract

- In patients with gross hematuria, if an exact source is not seen, it is easy to see the jet of red urine pulsing from the involved ureteral orifice.

(134) (C) Allopurinol.

- Urate-lowering pharmacotherapy is recommended for patients with more than 2 gouty attacks per year, in patients with tophi and in patients with joint damage.

- Allopurinol is the first-line urate-lowering therapy.

- However, this therapy should not commence until the acute phase of gout has completely resolved because fluctuations in serum uric acid levels will exacerbate the inflammatory process.

- When initiating urate lowering therapy, concurrent prophylaxis with low-dose colchicine for 3-6 months has been shown to reduce the risk of flare ups.

(135) (A) Testicular torsion.

Painful red swollen scrotum means torsion of the testis if proven otherwise; reduced blood flow usually due to ischemia, this means torsion.

(136) (A) Non-contrast spiral CT scan of the abdomen.

- Non contrast helical CT is the most sensitive and specific radiological test for renal stones (e.g. facilitates fast definitive diagnosis) which has sensitivity 95-100% and specificity 94-96%

- Indirect signs of the degree of obstruction provide information on non-genourinary conditions

(137) (A) Interstitial cystitis.

- Interstitial cystitis is noninfectious bladder inflammation that causes pain (suprapubic, pelvic and abdominal), urinary frequency and urgency with incontinence

Diagnosis is by history and exclusion of other disorders initially and by cystoscopy and biopsy

- With treatment most patients improve but cure is rare

- Treatment varies but includes dietary changes, bladder training, pentosan, analgesics and intravesical therapies.

Despite years of intensive research there are no specific urinary markers, no radiographic, laboratory serologic findings and no biopsy patterns that are diagnostic for interstitial cystitis

- Interstitial cystitis is a diagnosis of exclusion.

(138) (A) Painless bleeding.

Internal hemorrhoids depend on the type present. Internal hemorrhoids usually present with painless hematochezia; while external hemorrhoids may produce few symptoms or thrombosed significant pain and swelling in the area of the anus, dermotherapy is ideal for treatment of internal hemorrhoids (first degree with bleeding and early second degree hemorrhoids).

Complicated hemorrhoids usually are not associated with pain, but fissures more often are.

(139) (D) Proctalgia fugax.

Proctalgia fugax (levator syndrome) is a severe, episodic, rectal and sacrococcygeal pain, can be caused by cramp of the pubococcygeus or levator ani muscles.

Most often occurs in the middle of the night and lasts from seconds to minutes, an indicator for differential diagnosis of levator ani syndrome, which presents as pain and aching lasting 20 minutes or longer.

During an episode the patient feels spasm-like, sometimes excruciating, pain in the anus, often misinterpreted as a need to defecate.

The pain episode subsides by itself as the spasm disappears on its own, but may reoccur, simultaneous stimulation of the local autonomic system can cause erection in males, because of the high incidence of internal anal sphincter thickening with the disorder, it is thought to be spasm of the internal anal sphincter or that it is neuralgia of pudendal nerves, is recurrent and there is also no known cure.

However, some studies show effective relief by Botulinum toxin, pudendal nerve block and calcium channel blockers.

(140) (A) Can be due to portal hypertension and pregnancy.

The exact cause of hemorrhoids remains unknown, a number of factors which increase intra-abdominal pressure, in particular constipation, diarrhea, prolonged straining, increased abdominal pressure such as ascites or pregnancy, childbirth, heavy lifting, chronic cough, anal intercourse and hereditary factors, believed to play a role in hemorrhoid development.

(141) (C) Daily clean.

Pilonidal sinus is a sinus tract which commonly contains hairs.

It is a common disorder among young adults.

Observed most commonly in people 15-30-year-old, it occurs after puberty, when sex hormones are known to affect the pilosebaceous gland and change healthy body hair growth, treatment is conservative in mild case by remove all hair, washing and cleaning. If it is not relieved, surgery is done.

(142) (A) Hemorrhoidectomy.

The classification of internal hemorrhoid:

1st degree: hemorrhoid which is not prolapsed.

2- Second degree: hemorrhoid prolapsed with defecation but spontaneously reduced,

3rd degree: hemorrhoid prolapsed with defecation, but must be reduced manually,

4th degree: hemorrhoids are prolapsed and cannot be manually reduced.

- Treatment according to the classification:
- First-degree and second-degree hemorrhoids can usually be treated conservatively as long as symptoms are minor.
- Third degree: life style modification with band ligation, sclerotherapy or cryotherapy, if the treatment failed, surgery is done.
- Fourth degree: surgery (hemorrhoidectomy).

(143) (B) Posterior.

- 90% of anal fissures occur in posterior midline.

(144) (A) Excision and drainage.

(145) (C) Increase fiber diet

(146) (B) Hemorrhoids.

- Bleeding during bowel movements is the most common sign of hemorrhoids.

(147) (Q) Hemorrhoids.

- Hemorrhoids are swollen blood vessels in the lower rectum.
- Rectal bleeding is the most common presenting symptom.
- The blood is usually bright red and may drip, squirt into the toilet bowl, or appear as streaks on the toilet paper.

(148) (A) Incision and drainage.

- This is a case of perianal abscess.
- Perianal abscess should be drainage without waiting fluctuation.

(149) (A) Anal fissure.

- Anal fissures is a painful linear tear or crack in the distal anal canal, which in the short term usually involves only the epithelium and in the long term involves the full thickness of the anal mucosa.
- Most anal fissures occur in the posterior midline with the remainder occurring in the anterior midline.

(150) (A) Wash by water with room temperature.

- The first step in mild burn is to stop burning process and cooling by water with room temperature, removes heat and prevents progression of the burn.

(151) (B) Incision and drainage under local anesthesia.

- It is likely to be a nail bed infection, may be paronychia, may start as redness and swelling around the nail, called cellulitis.
- It may be a mild infection, but often is associated with a small abscess.
- If there is evidence of an abscess, it is best to drain infection.
- No indication for antibiotic.

(152) (C) Nine.

le of line to s ate bo a area

Head a ne 9%.

ch upper a %

3 Each lower limb: 18%.

4 Each pos erio a I anterior ink 18%

erineum anc enitalia: 1%.

e tota is 1009

(153) (B) Oral antibiotics.

rpical antibiotics can be used as first-line agents in cases of recurrent superficial folliculitis.

area involved is widespread or persistent or if a deep infection is present, systemic antibiotics be indicated

cterial folliculitis may be treated with antibacterial skin washes and topical and/or oral antibiotics, derate cases of bacterial follic.i litis may be treated by a routine of twice daily application of a topical antibiotic.

(154) (C) Low molecular weight heparin is safe and does not require regular monitoring the patient.

molecular .eight heparin activity is measured in units of factor x inactivation and monitoring of aPTT s not required e dose is weig lit adjusted

increased bioavailability and prolonged half-life of Low molecular weight heparin allows for patient treatment of DVT using once-daily or twice daily SC treatment regimens, le efficacy and safety of Low molecular weight heparin for the initial treatment of DVT have been well blished in several trials.

(155) (C) 5 cm painless area with no blusters (third degree, full thickness).

Painless area with no blusters that indicate involve full thickness (third degree).

O.ie of the indication for transferring to burn unit is if the site of burning area or skin full thickness loss.

(156) (D) Saphenous vein laser treatment.

Ei love nous laser treatment in saphenous vein is a minimally invasive US guided technique used for treat ng varicose veins using laser energy commonly performed by a phlebologist, interventional ra< ologist or vascular surgeon.

(157) (B) Epidural steroid injection.

Depending on t ie severity of symptoms, treatments for a herniated disc include physical therapy, scle relaxant medications, pain medications, anti-inflammation medications, local injection of cortisone epidural injections and surgical operations.

ny case ai peopli with a disc herniation should rest and avoid reinjuring the disc.

Sometimes even people w th relatively severe pain early on can respond to conservative measures without the ne id for surg cal intervention.

Only a small per centage of patients with lumbar disk herniation require surgery.

surge is pically recommended only when a period of nonsurgical treatments has not improved the pa nful symptoms.

(158) (B) Blood transfusion.

- The femur fracture is mean the blood loss more than 1,500 ml and blood pressure is low, so most important step is to replace the patient by blood and crystalloid.

(159) (A) Antibiotic must be given, then remove the mass.

- Mass with punctum and if there is white frothy discharge, it is likely to be infection.
- It should be covered by antibiotics first then be removed.

(160) (A) Dorsiflexion position.

- This is a case of carpal tunnel syndrome where is the median nerve is compressed at the wrist.
- Tinel's sign is a way to detect irritated nerves; it is performed by lightly tapping (percussing) over the nerve to elicit a sensation of tingling or (pins and needles) in the distribution of the nerve.
- In carpal tunnel syndrome, Tinel's sign is often positive causing tingling in the thumb, index, middle finger and the radial half of the fourth digit.
- The use of wrist splint to maintain the wrist in slight dorsiflexion, which will maximize the space in carpal tunnel and is the most common therapy used to treat mild to moderate carpal tunnel syndrome.

(161) (B) Antibiotics, incision and drainage.

- Some abscesses can be treated with antibiotics, but often the lining of the abscess cavity blocks the drug from getting to the source of infection; in this case, the cavity must be drained.
- Most abscesses heal after drainage alone; others require drainage and antibiotic treatment
- For patients with abscess more than 5 cm, multiple lesions, extensive surrounding cellulitis, immunocompromised, or systemic signs of infection, both incision and drainage and antimicrobial therapy are recommended.

(162) (B) Leukopenia especially neutropenia.

- The use of sulfonamides has been associated with hematologic toxicity, including methemoglobinemia, sulfhemoglobinemia, leukopenia, granulocytopenia, eosinophilia, hemolytic anemia, aplastic anemia, purpura, clotting disorder, thrombocytopenia, hypofibrinogenemia and hypoprothrombinemia.
- Renal toxicity such as urolithiasis and nephrolithiasis, nephritis, toxic nephrosis, hematuria, proteinuria and elevated BUN and creatinine.
- Also can cause hepatotoxicity.
- Dermatologic side effects have rarely included skin necrosis, skin discoloration and rash.

(163) (B) Growing painless mass.

- Soft tissue sarcomas can occur anywhere in your body, but the most common types of soft tissue sarcomas are gastrointestinal stromal tumors and soft tissue sarcomas.
- Symptoms are: noticeable lump or swelling, pain if it presses on nerves or muscles, a blockage in the stomach or intestines, or gastrointestinal bleeding, if the tumor is located in the abdomen or digestive tract.

(164) (A) Irrigation with water.

- Both acid exposures and alkaline exposures should be irrigated within several minutes of the exposure, to decrease the pH change in the skin and the extent of dermal injury.

(165) (B) Ice, rest, bandages and elevation of the limb.

This is a case of muscular strain.

The first-line treatment for a muscular strain in the acute phase includes five steps commonly known as P.R.I.C.E. The explanation is as follows:

- Protection: apply soft padding to minimize impact with objects.

Rest: rest is necessary to accelerate healing and reduce the potential for reinjury.

- Ice: apply ice to reduce swelling by reducing blood flow to the injury site no more than 20 minutes at a time.

Compression: wrap the strained area with an elastic bandage, to reduce swelling.

Elevation: keep the strained area as close to the level of the heart as is conveniently possible to keep blood from pooling in the injured area.

(166) (C) Most fractures occur in the posterior medial region that is comprised of the thinnest bones.

Lower jaw fracture: facial skeleton fractures can result from low, medium, or high velocity trauma, lower jaw fractures may occur in combination with zygomatic arch fractures, Le Fort type I or II mid-face fractures or fractures of other orbital bones.

Result from impact injury to the globe and upper eyelid, CT scan shows fracture.

(167) (C) Press the bleeding site, life-threatening

hemorrhage must be controlled.

A combination of manual pressure, proximal compression with either a tourniquet or a manual blood pressure cuff and elevation is typically sufficient to control external arterial hemorrhage.

If these are unsuccessful, hemostatic agents may be needed, if available, external bleeding controlled with direct pressure.

(168) (A) Collagen synthesis.

Vitamin C is essential for the building of collagen, the most abundant protein built in our bodies and a major component of connective tissue.

(169) (A) Admit the patient to the hospital for serial x-rays and abdominal examination.

In the case of a very small object which is likely to pass into the stool without difficulty, physicians should not re-x-ray unless it takes more time than expected, (2-3 days) for the object to pass into the stool, more dangerous objects, like open safety pins, might be followed with repeated x-rays and repeat examinations.

(170) (A) Gas inhalation.

Smoke inhalation is the leading cause of death due to fires.

Smoke produces injury through several mechanisms, including thermal injury to the upper airway, irritation of the airways from soot, asphyxiation and toxicity from carbon monoxide and other gases such as cyanide.

(171) (B) Tell her what you found and refer to surgery.

Surgical instruments can be left in a patient's body after surgery.

This medical error can result in serious complications, including pain, infection and in some cases, death.

- At a minimum, a patient should be referred to additional surgery so that the items left behind can be removed.
- The most common items left behind are sponges, but cases of retained instruments also include scissors, needles, scalpels and more.

(172) (A) Apply silver sulfadiazine cream to all burned areas, cover them and admit to hospital.

- First degree: epidermis + painful + no blister.
- Second degree: epidermis + partial dermis + painful + blister.
- Third degree: epidermis + full thickness dermis + painless, need graft.
- Silver sulfadiazine cream and mafenide used for all types of burn.
- Supportive treatment: tetanus and IV narcotic can be used for all types of burn.
- IV fluid use only in burn more than 10% of body surface area in second and third degree, according to Parkland formula.
- Parkland formula: (fluid in first 24 hours = 4 x weight in kg x body surface area, 50% in first 8 hours and another 50% in next 16 hours.
- In patients with first degree and second degree less than 10% burn (head and neck 9%), there is no need for IV fluid.

(173) (A) Rapid IV fluid crystalloid.

- This is a case of hypovolemic shock.
- Most commonly, hypovolemic shock occurs because of intravascular volume depletion caused by whole blood loss.
- Early signs of this loss are tachycardia, decreased pulse pressure, mild anxiety and mild tachypnea.
- The most important thing to manage hypovolemic shock is stop bleeding and replace volume by isotonic lactated ringer.
- Surgical hemostasis and precision resuscitation can restore normal blood volume quickly after major trauma with infusion of 2,000 ml of crystalloid before transfusion of warmed blood.
- Also, should monitor urine output, blood pressure, heart rate, mental status, capillary refill, body temperature.

(174) (A) Streptococcal gangrene.

- Necrotizing fasciitis or (Streptococcal gangrene): this is a rare infection of the skin and deeper tissues characterized by extensive and rapidly spreading death of tissue and underlying structures.
- It begins as an area of mild redness on the skin, but over the next 2-3 days undergoes a marked change.
- The inflammation becomes more pronounced, the skin becomes dusky and then purplish and then bloody blisters develop in the skin.
- Staphylococcal disease of the skin usually results in a localized collection of pus, known as an abscess, boil, or furuncle, depending upon the exact type of lesion that is present, the affected area may be red, swollen and painful.

(175) (A) Topical antibiotic.

- Hidradenitis suppurativa is a skin disease characterized by clusters of chronic abscesses, epidermoid cysts, sebaceous cysts, pilonidal cyst or multilocalised infections.
- Antibiotics- taken orally, these are used for their anti-inflammatory properties rather than to treat infection.
- Most effective is a combination of rifampicin and clindamycin given concurrently for 2-3 months.

(176) (C) Delayed response of blood mismatch.

- A high-output fistula increases the possibility of fluid and electrolyte imbalance and malnutrition, this patient is on total parenteral nutrition, so the proper cause is unresponsive to blood unit which was given and then he became comatose due to blood loss.

(177) (D) Protein C deficiency and protein S deficiency play a role in DVT formation.

- Genetic factors that increase the risk of venous thromboembolism include deficiencies of three proteins that normally prevent blood from clotting (protein C, protein S and antithrombin), in addition to non-O blood type and mutations in the factor V and prothrombin genes.
- Deficiencies in antithrombin, protein C and protein S are rare but can be strong or moderately strong risk factors.

(178) (A) First degree burn.

- First degree burns of the skin are red, blanchable with touch, painful with touch and usually will cause skin peel in 3-5 days.
- Scarring rarely occurs.

(179) (C) Parietal lobe.

- Right-sided parietal lobe injury may result in neglecting parts of the body; this may have dramatic effects on basic skills, such as bathing, dressing, or feeding oneself.
- A left-sided parietal lobe injury often includes confusion over right and left directional signs, writing and math skills may sometimes be reduced or completely lost.

(180) (A) Secure air way.

- The patient is a victim of RTA and the first thing should he should be treated for is life threatening condition, which based on advance traumatic life support. started by primary survey.
- Respiratory obstruction in the airway should be ruled out.
- Never use tourniquet, this can cause gangrene of the limb due to reperfusion syndrome.

(181) (A) Fluid replacement should be given 1/2 of fluid in the first 8 hours.

- Parkland formula: fluid in first 24 hours = $4 \times \text{weight in kg} \times \% \text{ body surface area}$.
- 50% in first 8 hours and the rest in the next 16 hours.
- Alkali burn is more serious because the body can't buffer the alkali.

(182) (A) Trauma.

- Most common infection in the hand caused by frequent trauma to area.
- Acute paronychia which is the most common infection of the hand is an infection of the soft tissues alongside the nail plate.
- This typically results from inoculation of bacterium between the nail and surrounding tissues, often as consequence of relative minor trauma such as nail biting, puncture wound and foreign body.

(183) (A) Ulnar nerve decompression.

- In the absence of intrinsic muscle atrophy, 4-8 weeks of conservative treatment should be attempted.
- Surgery should be done if the patient fails to respond to conservative treatment, intrinsic muscle atrophy or weakness, severe or persistent symptoms.

(184) (D) Bright red and spurting.

- **Arterial bleeding is spurting: arteries transport blood under high pressure, bleeding from an artery is bright red blood that spurts with every heartbeat.**
- **Venous bleeding is steady flow: veins carry blood under low pressure, bleeding from a vein is a steady flow of darker blood.**
- **Capillary bleeding is oozing: capillaries also carry blood under low pressure.**

(185) (D) Unable to do thumb opposition.

- **Median nerve injury is common with wrist injury and patient unable to do thumb opposition.**
- **Radial nerve injury is common with burners injury (burners groove) and the patient will present with wrist drop.**
- **Ulnar nerve injury is common with elbow injury and patient will present with claw hand.**

(186) (A) Claw hand.

- **Ulnar nerve injury is common with elbow injury and patient will present with claw hand.**

(187) (B) Wrist drop.

- **Radial nerve injury is common with burners injury (burners groove) and the patient will present with wrist drop.**

(188) (C) Evacuate the hematoma.

- **Subungual hematomas are common nail bed injuries caused by blunt or sharp trauma to the fingers or toes.**
- **Bleeding from the rich vascular nail bed results in increased pressure under the nail and can cause significant discomfort.**
- **Subungual hematoma drainage also known as a nail bed trephination and can be performed to relieve this discomfort.**

(189) (B) Elevate the legs and stocking.

- **This is a case of venous ulcers.**
- **Venous ulcers are usually located in the malleolar area.**
- **Venous ulcers must be managed with an arsenal of strategies to control venous insufficiency, heal the wound and prevent recurrence by exercise programs, use of compression stockings, leg elevation, smoking cessation and avoidance of estrogen therapies.**

(190) (A) Immediate surgery.

- **This is a case of epidermoid cysts.**
- **Epidermoid cysts appear as flesh colored to yellowish, firm, round nodules of variable size with a central pore or punctum.**
- **It is removed via simple excision or incision with removal of the cyst and cyst wall through the surgical defect.**
- **If the entire cyst wall is not removed, the lesion may recur.**
- **Excision with punch biopsy technique may be used if the size of the lesion permits.**

(191) (D) Stage IV.

Stage I: non-blanchable redness that does not subside after relief of the pressure

Stage II: damage to epidermis and dermis but not deeper tissue

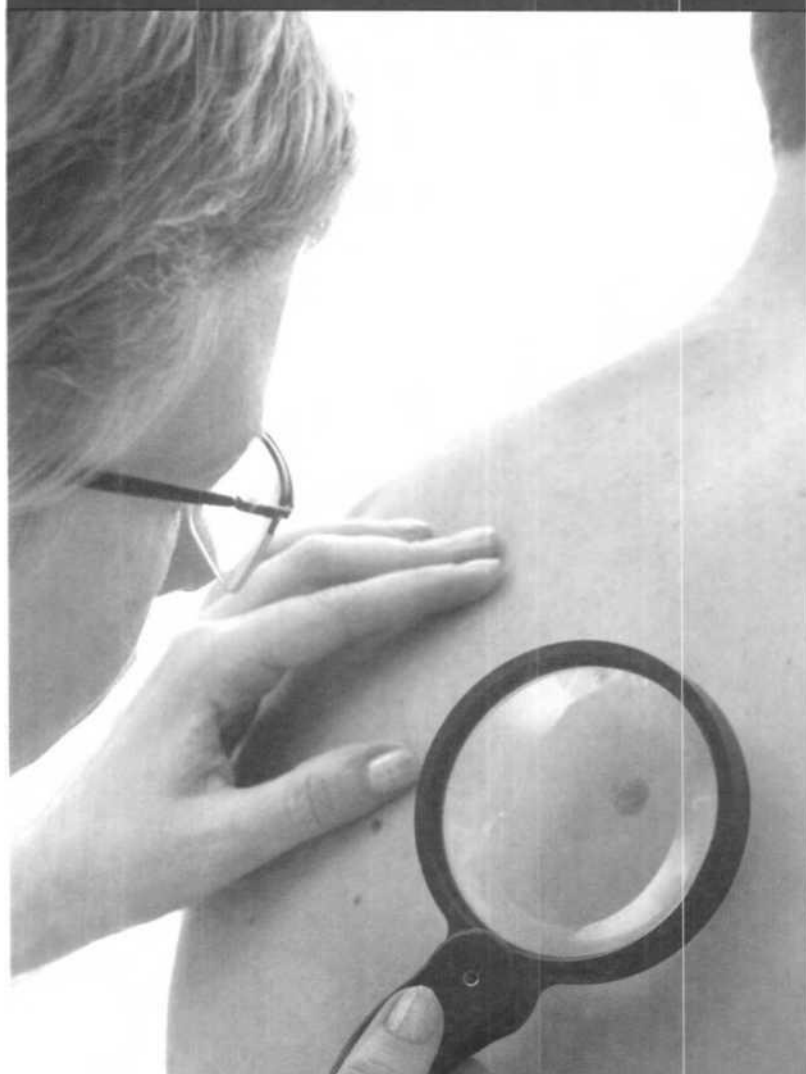
Stage III: subcutaneous tissue involvement, Stage IV: deepening and involvement of

subcutaneous tissue as muscles and bones

(192) (A) Admit the patient for serial x-rays and abdominal examination.

In the case of a small object which is likely to pass into the stool without difficulty, physicians might repeat x-ray unless it takes more time than expected, (2-3 days) for the object to pass into the stool, for dangerous objects, like open safety pins, might be followed with repeat x-rays and repeat examinations

DERMATOLOGY



(1) A patient with known case of HIV presented with white patches in oral cavity. What is the management?

- (A) Oral antibiotic.
- (B) Local antibiotic.
- (C) Local steroid.
- (D) Antiretroviral therapy.

(2) How to prevent flares in patient with psoriasis disease?

- (A) Avoid sun exposure.
- (B) Avoid skin trauma.
- (C) Use systemic steroid.
- (D) All of the above.



(3) A patient presented with severe itching in ankle and between fingers. On examination; there is well demarcated lesion. What is the diagnosis?

- (A) Scabies.
- (B) Tinea pedis.
- (C) Cutaneous candidiasis.
- (D) Erythema multiforme

(4) A child presented to the clinic with scales in nasal fold and around mouth as in the picture. What is the diagnosis?

- (A) Seborrheic dermatitis.
- (B) Non-bullous impetigo.
- (C) Discoid lupus erythematosus.
- (D) Kerion.



(5) Which of the following drug may induce urticaria?

- (A) Azithromycin.
- (B) Hydralazine.
- (C) Cortisone.
- (D) Penicillin.

(6) Which of the following drugs considered as a line of treatment for psoriasis?

- (A) Systemic steroid.
- (B) Topical steroid.
- (C) Folic acid.
- (D) None of the above.

(7) What is the treatment of scabies in pregnant women?

- (A) Permethrin cream.
- (B) Malathion lotion.
- (C) Sulfur soap.
- (D) Crotamiton cream.

(8) A 42-year-old patient presented with 5 days history of skin eruption associated with mild itching in hands and soles. On examination; there were target lesions with a pink-red ring around a comparatively pale center. What is the diagnosis?

- (A) Erythema multiforme.**
- (B) Fixed drug eruption.**
- (C) Pityriasis rosea.**
- (D) Erythema nodosum.**

(9) A patient presented with small polygonal rash flat which is purple in color at the top. What is the diagnosis?

- (A) Lichen planus.**
- (B) Pityriasis rosea.**
- (C) Syphilis.**
- (D) Guttate psoriasis.**

(10) A patient presented with fever, anorexia, headache and malaise; after one day the appearance of vesicular rash was noticed that is pleomorphic with all forms (vesicles, pustules, macules and crust) and is associated with pruritus. What is the diagnosis?

- (A) Chickenpox.**
- (B) Drug eruptions.**
- (C) Herpes Simplex.**
- (D) Syphilis.**

(11) A patient presented with pustule around the mouth and diagnosed to be infected with herpes simplex virus. What is the treatment?

- (A) Oral antibiotic.**
- (B) Topical antibiotic.**
- (C) Acyclovir.**
- (D) Topical steroid.**

(12) Which one of the following is true about dermatomyositis?

- (A) Associated with inflammatory bowel disease.**
- (B) It might be associated with underlying gastrointestinal malignancy.**
- (C) Present as distal muscle weakness.**
- (D) Not associated with dyspnea, dysphagia or dysphonia.**

(13) What is the treatment of tinea capitis?

- (A) Tar shampoo.**
- (B) Griseofulvin.**
- (C) Nystatin**

ointment (C) Wood lamp.

- (14) A male patient presented with scaly fine papular rash on front of the scalp, nose and retroauricular. What is the treatment?
- (A) Ketoconazole cream.
 - (B) Oral augmentin.
 - (C) Griseofulvin.
 - (D) All of the above.
- (15) Which of the following is considered as a line of treatment of simple nodule(s)?
- (A) Rupture it.
 - (B) Cryotherapy.
 - (C) Chemotherapy.
 - (D) Radiation.
- (16) A patient presented with red patches on face and telangiectasia. What is the treatment?
- (A) Doxycycline.
 - (B) Topical steroids.
 - (C) Antihistamines.
 - (D) Calcium channel blockers.
- (17) A young male patient presented with single white patch on his chest; in hot weather it changed to be hypopigmented with mild itching. What is the diagnosis?
- (A) Pityriasis versicolor.
 - (B) Vitiligo.
 - (C) Syphilis.
 - (D) Pityriasis alba.
- (18) Regarding cosmetic purpose, what is the treatment of acne rosacea?
- (A) Exposure to sunlight.
 - (B) Fluorescent.
 - (C) Strenuous exercise.
 - (D) Topical antibiotic.
- (19) Which one of the following is consider as a treatment for chlamydia?
- (A) Doxycycline.
 - (B) Beta-blockers.
 - (C) Calcium channel blockers.
 - (D) All of the above.
- (20) A 19-year-old patient with no known illness, presented with fever, arthritis and rash mainly in the palms and soles. He gave a history of illegal sexual relationship. What is the most likely diagnosis?
- (A) Chancroid.
 - (B) Secondary Syphilis.
 - (C) Chlamydia trachomatis.
 - (D) Drug allergies.

(21) A female patient presented with itching in the vulva and thigh with no vaginal discharge. What is the diagnosis?

- (A) Contact dermatitis.
- (B) Syphilis.
- (C) Chlamydia trachomatis.
- (D) Seborrheic dermatitis.

(22) A patient presented with circular welts and scar in the middle associated with severe itching, then he suffers from swelling in his mouth and lips. What is the diagnosis?

- (A) Dermatographia.
- (B) Solar urticaria.
- (C) Cold urticaria.
- (D) Cold urticaria and angioedema.

(23) A patient presented with scaly and itchy lesion on posterior side of knees and anterior side of elbows (flexor areas of the limbs). What is the diagnosis?

- (A) Contact dermatitis.
- (B) Atopic dermatitis (Eczema).
- (C) Scabies.
- (D) Seborrheic dermatitis.

(24) Which one of the following is a true about isotretinoin which is used for the treatment of acne?

- (A) It causes oily skin.
- (B) It causes hypersensitive skin to the sun.
- (C) It causes enlargement in breast tissue.
- (D) Does not cause birth defect.

(25) What is the best treatment of moderate to severe acne vulgaris?

- (A) Oral isotretinoin.**
- (B) Topical retinoids.
- (C) Topical clindamycin.
- (D) Oral antibiotics.

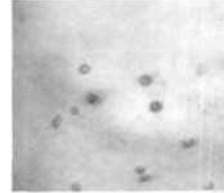
(26) An 80-year-old man presented with severe itching mainly in the wrist and between fingers with excoriation mark linear and superimposed by secondary infection and sleep disturbance. What is the diagnosis?

- (A) Monilia.
- (B) Eczema.
- (C) Ichthyosis.
- (D) Scabies.

(27) Which of the following drugs is used in the treatment of cold urticaria?

- (A) Cyproheptadine.
- (B) Prednisone.
- (C) Montelukast.
- (D) Nifedipine.

(28) Regarding the following picture, what is the diagnosis?



- (A) Molluscum contagiosum.
- (B) Viral warts.
- (C) Erythema nodosum.
- (D) Chickenpox.

(29) A postpartum woman noticed that when she is exposed to the sun, she started getting brown discoloration on her face. What is the diagnosis?

- (A) Urticaria pigmentosa.
- (B) Melasma.
- (C) Addison disease.
- (D) Drug induced photosensitivity.

(30) Which of the following is considered as a treatment of pyoderma gangrenosum?

- (A) Oral antibiotic.
- (B) IV antibiotic.
- (C) Local antibiotic.
- (D) IV corticosteroids and cyclosporine.

(31) What is the treatment of cystic acne with scarring?

- (A) Isotretinoin.
- (B) Aspirin.
- (C) Oral contraceptive pills.
- (D) All of the above.

(32) A 15-year-old boy presented with a patch in the right lower leg, this patch is clear in center and red in peripheral as shown in the following picture, there is no fever or other complain. What is the diagnosis?



- (A) Contact dermatitis.
- (B) Tinea corporis.
- (C) Lyme disease.
- (D) Psoriasis.

(33) A 28-year-old farmer presented with a lesion in his hand which is an elevating dome shape mass which is capped with keratin. What is the diagnosis?

- (A) Melanoma.
- (B) Keratoacanthoma.
- (C) Basal cell carcinoma.
- (D) Squamous cell carcinoma.

(34) A 70-year-old patient presented with ulcerating lesion (3x4 cm) just below his nostrils; this lesion has

been increasing in size since he has retired from his work 10 years ago and was in continuous sunlight exposure. What is the diagnosis?

- (A) Squamous cell carcinoma.
- (B) Adenocarcinoma.
- (C) Keratoacanthoma.
- (D) Melanoma.

(35) Which one of the following diseases has irregular border, asymmetrical, different in color (shades of

black, brown and tan may be present) and change in size (increased usually)?

- (A) Melanoma.
- (B) Basal cell carcinoma.
- (C) Mycosis Fungoides.
- (D) None of the above.

(36) Which of the following is used for the treatment of psoriasis with 15% body involvement?

- (A) Topical steroid.
- (B) Methotrexate.
- (C) Topical vitamin D analogs.
- (D) Sulfasalazine.

(37) A patient with known case of bronchial asthma presented with scales on face, forehead and antecubital fossa. What is the diagnosis?

- (A) Atopic dermatitis.
- (B) Contact dermatitis.
- (C) Mycosis fungoides.
- (D) Scabies.

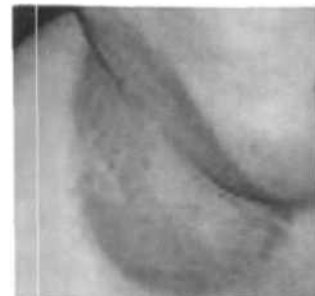
(38) What is the side effect of isotretinoin which is used for the treatment of acne?

- (A) Birth defect.
- (B) Dry skin.
- (C) Epistaxis.
- (D) All of the above.

(39) A male patient presented with skin lesion like in

the picture. Under wood's lamp it fluoresce a coral red color, what is the diagnosis?

- (A) Erythrasma.
- (B) Candida albicans.



- (40) A patient presented with a scaly hypopigmented macules on the chest and arms, which seem even lighter under the sunlight. What is the treatment?
- (A) Topical steroid.
 - (B) Selenium sulfide.
 - (C) Topical antibiotics.
 - (D) Oral antibiotics.
- (41) What is the main treatment of non-inflammatory acne?
- (A) Retinoic acid.
 - (B) Clindamycin.
 - (C) Azelaic acid.
 - (D) Erythromycin.
- (42) An athlete presented with a well demarcated rash in the groin area and some have clear centers. What is the treatment?
- (A) Cortisone cream.
 - (B) Antifungal cream.
 - (C) Antibiotics.
 - (D) Conservative treatment.
- (43) What are the target lesions that are found in erythema?
- (A) Multiforme.
 - (B) Annulare.
 - (C) Nodosum.
 - (D) Marginatum.
- (44) A patient presented with hypopigmented macules and loss of sensation due to nerve involvement and diagnosed with leprosy. Which type of leprosy he has?
- (A) Tuberculoid.
 - (B) Lepromatous.
 - (C) Borderline lepromatous.
 - (D) Nodule.
- (45) What is the treatment of papules or pustules in acne?
- (A) Topical benzoyl.
 - (B) Peroxide plus topical antibiotics.
 - (C) Intralesional steroid injection.
 - (D) Oral antibiotics.
- (46) A patient presented with bullous in his foot. By investigations; biopsy showed sub-dermal lysis, fluorescent stain showed IgG. What is the diagnosis?
- (A) Epidermolysis bullosa.
 - (B) Pemphigus vulgaris.
 - (C) Herpes simplex virus associated with erythema multiforme.
 - (D) Bullous pemphigoid.

- (47) A patient presented with blepharitis and acne rosacea without keratitis. What is the best treatment?
- (A) Topical chloramphenicol.
 - (B) Topical gentamicin.
 - (C) Doxycycline.
 - (D) Isotretinoin.
- (48) What is the best treatment for tinea pedis in athletic patient?
- (A) Topical antifungal.
 - (B) Systemic antifungal.
 - (C) Drugs start with terbinafine.
 - (D) Oral doxycycline.
- (49) A male patient presented with hair loss started as fronto-temporal and moving toward the vertex (top of the head). What is the diagnosis?
- (A) Androgenetic alopecia.
 - (B) Alopecia areata.
 - (C) Anagen effluvium.
 - (D) Telogen effluvium.
- (50) A 2-month-old infant presented with yellow crusty greasy scaling lesion on scalp and forehead. What is the diagnosis?
- (A) Seborrheic dermatitis.
 - (B) Erythema multiforme.
 - (C) Eczema.
 - (D) Impetigo.
- (51) A female patient presented with 9 weeks history of elevated erythematous wheals on her body with swelled lip. There is no history of recent travel, food allergy or drug ingestion. What is the diagnosis?
- (A) Chronic angioedema and urticaria.
 - (B) Cholinergic urticaria.
 - (C) Solar urticaria.
 - (D) Cold urticaria.
- (52) What is the most common symptom of soft tissue sarcoma?
- (A) Paralysis.
 - (B) Progressive enlarging mass.
 - (C) Pain.
 - (D) Soreness.
- (53) A patient presenting with a scaly, flaky red skin in hair margin, nasal folds and behind ears with papule and irregular erythema associated with itching. What is the treatment?
- (A) Ketoconazole cream.
 - (B) Acyclovir.
 - (C) Topical antibiotic.

- (54) A 70-year-old man presented with fever and painful vesicular rash with blisters over the right side of the forehead. What is the management?
- (A) IV Antibiotic.
 - (B) IV steroid.
 - (C) Oral acyclovir.
 - (D) Topical antibiotic.
- (55) A patient presents with mid face pain, erythematous lesions and vesicles on periorbital and forehead, the pain is located at nose which is erythematous. What is the diagnosis?
- (A) Roseola infantum.
 - (B) Herpes simplex virus.
 - (C) Herpes zoster.
 - (D) Chickenpox.
- (56) A patient presented with fever, sore throat and desquamation of hands and feet. On examination; BP = 170/110 mmHg. What is the diagnosis?
- (A) Syphilis.
 - (B) Toxic shock syndrome.
 - (C) Scarlet fever.
 - (D) Kawasaki disease.
- (57) What is the most common site involved in Lichen planus?
- (A) Scalp.
 - (B) Knee.
 - (C) Inner wrists, the forearms and the ankles.
 - (D) Mouth.
- (58) A female patient presented with red rash under the breast with itching. What is the management?
- (A) Topical antibiotic.
 - (B) Oral antibiotic.
 - (C) Antifungal cream.
 - (D) Topical steroid.
- (59) A patient presented with scaling skin and itching in his face and antecubital fossa. He has a family history of allergy. What is the diagnosis?
- (A) Seborrheic dermatitis.
 - (B) Contact dermatitis.
 - (C) Atopic dermatitis (Eczema).
 - (D) Scabies.
- (60) A female patient on oral contraceptive pills presented with skin changes on the face. What is the diagnosis?
- (A) Lupus erythematosus.
 - (B) Melasma.
 - (C) Addison disease.
 - (D) Mastocytosis.

(61) What is the treatment of herpes zoster in ophthalmic division to prevent post herpetic neuralgia?

(A) Oral acyclovir alone.

(B) Prednisolone alone.

(C) Oral acyclovir and prednisolone.

(D) Oral antibiotic.

(62) An infant presented with genital rash (sparing genital fold) and it is not responding to antibiotics. What is the most likely diagnosis?

(A) Candidiasis.

(B) Diaper dermatitis.

(C) Contact dermatitis.

(D) Atopic dermatitis.

(63) A patient presented with acne of several appearances, as open, closed and red. What is the most likely type?

(A) Obstructive acne.

(B) Inflammatory acne.

(C) Acne fulminans.

(D) Acne conglobata.

(64) What is the treatment of acne vulgaris?

(A) Topical tretinoin and clindamycin.

(B) Topical Erythromycin and systemic tetracycline.

(C) Topical Erythromycin and systemic isotretinoin.

(D) Systemic isotretinoin.

(65) What is the treatment of chronic acne?

(A) Retinoic acid.

(B) Topical clindamycin.

(C) Topical erythromycin.

(D) Penicillin.

(66) A child presented with rash looks like honey. What is the diagnosis?

(A) Impetigo.

(B) Candidiasis.

(C) Contact dermatitis.

(D) Scabies.

(67) Which one of the following can be patient with cafe au lait spots?

(A) Axially freckling.

(B) Hypertension.

(C) Diabetes mellitus.

(D) Microcephaly.

(68) A patient is complaining of diarrhea, dermatitis and dementia. What is the diagnosis?

- (A) Pellagra.**
- (B) Drug eruptions.**
- (C) Pemphigus vulgaris.**
- (D) Seborrheic dermatitis.**

(69) What is the most effective treatment for rosacea?

- (A) Clindamycin.**
- (B) Erythromycin.**
- (C) Topical steroids.**
- (D) None of the above.**

(70) According to the following picture, what is the diagnosis?

- (A) Pityriasis rosea.**
- (B) Lichen planus.**
- (C) Psoriasis.**
- (D) Syphilis.**



(71) A child presented with ulcer near the angle of the mouth. On examination it appears to be bright red in color and 1.5 cm in size. What is the diagnosis?

- (A) Fungal infection.**
- (B) Impetigo.**
- (C) Atopic dermatitis.**
- (D) Angular cheilitis.**

(72) What is the treatment of nodule?

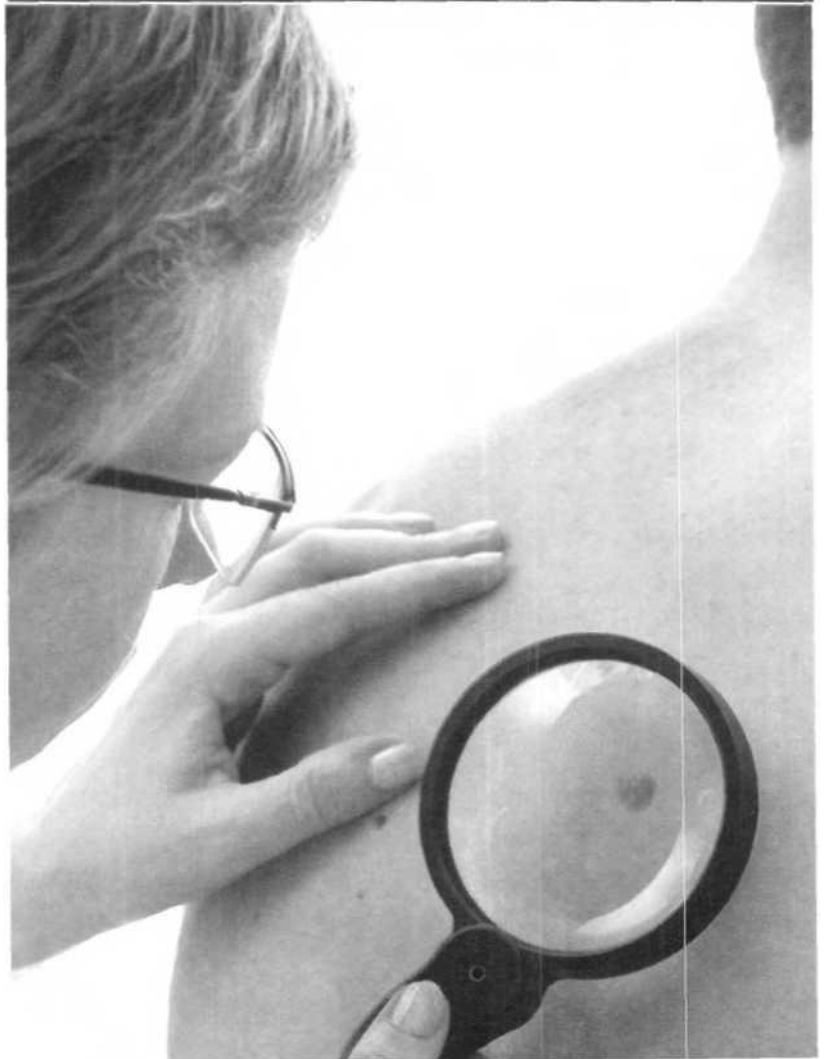
- (A) Topical steroid.**
- (B) Cryotherapy.**
- (C) Topical antibiotic.**
- (D) Oral antibiotic.**

(73) A patient presented with a large painful nodule in the nose. There is telangiectasia present on the face as well. What is the treatment?

- (A) Doxycycline.**
- (B) Clindamycin.**
- (C) Retinoid.**

ANSWERS

DERMATOLOGY



(1) (D) Antiretroviral therapy.

- This is a case of Kaposi's sarcoma, which shows up as spots on the skin (lesions) that look red or purple on white skin and bluish, brownish or black on dark skin.
- HIV infection has now become the most common cause of Kaposi's sarcoma.
- The best treatment for oral Kaposi's sarcoma in someone with HIV is effective antiretroviral therapy.

(2) (B) Avoid skin trauma.

- Minor skin traumas can cause the Koebner phenomenon (psoriasis plaques) at the site of a skin injury in about 50% of people with psoriasis.
- In addition, some of these people may develop new lesion following skin injury.
- Koebner phenomena can be triggered by bug bites, bruises, scrapes, poison ivy or poison oak chemical burns and sunburn.

(3) (B) Tinea pedis.

- A fungal foot infection of the soles of the feet and the interdigital spaces is called tinea pedis; and patients often experience pruritic lesions, scaly soles and, often, painful fissures between the toes.
- Patients may also describe vesicular or ulcerative lesions, which are not very common.
Some elderly persons may simply attribute their scaling feet to dry skin and not consider it as an infection.

(4) (B) Non-bullous impetigo.

Non-bullous impetigo appears as a red sore near the nose and/or mouth at the beginning. These sores soon break, leaking pus or fluid, which forms a scab, followed by a red mark. These sores heal without leaving a scar. These sores are usually not painful, but may feel itchy at times.

(5) (D) Penicillin.

Drugs that can cause urticaria are: dextroamphetamine, aspirin, ibuprofen, penicillin, clotrimazole, sulfonamides and anticonvulsants and anti-diabetic drugs.

(6) (B) Topical steroid.

Steroids are popular choice in preventing inflammation. Systemic corticosteroids are generally less effective and they can significantly exacerbate the disease upon withdrawal. Topical agents (steroids, retinoids and moisturizers) are used for mild disease, phototherapy for moderate disease and systemic agents (methotrexate, cyclosporine and retinoids) for severe disease. Folic acid protects against some of the common side effects seen with low-dose methotrexate (e.g. stomatitis).

(7) (A) Permethrin cream.

Permethrin cream is considered the most effective drug for treating scabies in patients. This is also recommended for patients who are pregnant. Other agents considered as safe treatment for scabies during pregnancy are sulfur 5-10% in petrolatum and crotamiton cream.

(8) (A) Erythema multiforme.

- Erythema multiforme usually presents with severe to mild itchy, pink-red blotches, symmetrically arranged and starting on the extremities.
- The classical (target lesion) appearance, with a pink-red ring around a pale center which usually resolves within 7-10 days.

(9) (A) Lichen planus.

- Lichen planus is a chronic recurrent rash which happens due to inflammation.
- It is a cell-mediated immune response of unknown origin.
- The rash is characterized by small, flat-topped, many-sided (polygonal) bumps that can join and grow into rough, scaly plaques on the skin.
- Signs and symptoms are well-described by the (6 Ps) well-defined Pruritic, Planar, Purple, Polygonal Papules and Plaques.
 - These rashes may also occur in the lining (mucous membranes) of the mouth or vagina.
- Oral and topical steroids, oral retinoids, immunosuppressant medications, hydroxychloroquine, tacrolimus and dapsone are used to treat lichen planus.

(10) (A) Chickenpox.

- Chickenpox is usually acquired through inhalation of airborne respiratory particles from an infected host
- High viral titers are found in the characteristic vesicles of chickenpox; viral transmission may also occur through direct contact with these vesicles, though the risk of transmission is lower.
- It is usually diagnosed clinically on the basis of the characteristic of the rash and successive lesions.
- Other causes of vesicular rashes are: herpes zoster virus, impetigo, contact dermatitis and eczema.

(11) (C) Acyclovir.

- People who have severe or prolonged outbreaks (especially if it is the first episode), people with weak immune system, or those with frequent recurrences will benefit from antiviral medications such as acyclovir, famciclovir and valacyclovir.
- In addition, topical antibiotic ointments also may be applied to prevent secondary bacterial infections.
- Mild cases may not need any treatment.

(12) (B) It might be associated with underlying gastrointestinal malignancy.

- Although an increased risk of malignancy has not been associated with juvenile dermatomyositis, it has been demonstrated in adults with dermatomyositis.
 - One study suggested a 6.5 folds increased risk of malignancy in patients with dermatomyositis.
- Patients > 45-year-old diagnosed with dermatomyositis show a higher risk of malignancy.
- The most commonly reported malignancies associated with dermatomyositis are ovarian cancer

(13) (B) Griseofulvin.

- Tinea capitis requires treatment with an oral antifungal agent.
- Newer antifungal medications, such as ketoconazole, itraconazole, terbinafine and fluconazole, have been reported as effective alternative therapy for tinea capitis. Of these agents, itraconazole and terbinafine are used most commonly.
- Griseofulvin is probably the most effective agent for infection with *Microsporum canis*.
- Scalp Trichophyton infections may successfully be eradicated using oral terbinafine, itraconazole or fluconazole for 4-6 weeks.
- However, these medications are not always successful and it may be necessary to try different agent to get the best result.
- Intermittent treatment may also be prescribed (e.g. once weekly dosages).

(14) (C) Griseofulvin.

- The diagnosis is Tinea capitis, which is a disease caused by superficial fungal infection of the skin of the scalp, eyebrows and eyelashes, with a propensity for attacking hair shafts and follicles.
- Systemic administration of griseofulvin provided the first effective oral therapy for tinea capitis.
- Topical treatment alone usually is ineffective and is not recommended for the management of tinea capitis.

(15) (B) Cryotherapy.

- Cryotherapy, also called cryosurgery, cryoablation or targeted cryoablation therapy, is a minimally invasive treatment that uses extreme cold to freeze and destroy a diseased tissue.
- It is used to treat skin tumors, pre-cancerous skin moles, nodules, skin tags, unsightly freckles, retinoblastomas, prostate, liver and cervical cancers, especially if surgical resection is not possible.

(16) (A) Doxycycline.

- This is a case of Rosacea which is a chronic condition.
- Rosacea typically begins as redness on the central face across the cheeks, nose, or forehead, but can also affect the neck, chest, ears and scalp, which is less common.
- In some cases, additional symptoms, such as *semi-permanent redness*, telangiectasia (dilation of superficial blood vessels on the face), red domed papules (small bumps) and pustules, red gritty eyes, burning and stinging sensations and in some advanced cases, a red lobulated nose (rhinophyma), may develop.
- Oral tetracycline antibiotics (tetracycline, doxycycline, minocycline) and topical antibiotics such as metronidazole are used as the first line of defense to relieve papules, pustules, inflammation and some redness.
- Treatment with topical steroids can aggravate the condition.
- In severe cases, laser surgery may help reduce the redness.
- Surgery to remove some swollen nose tissue may also improve the facial appearance.

(17) (A) Pityriasis versicolor.

- Pityriasis versicolor (also known as Dermatomycosis furfuracea. Tinea versicolor and Tinea flava) is a condition characterized by a rash on the trunk and proximal extremities.
- It is a common skin problem in which flaky discolored patches appear mainly on the chest and on the back.

- The term pityriasis is used to describe skin conditions in which the scale looks like bran.
- The multiple colors arising in the disorder contributes to the second part of the name versicolor.
- There is a pale, dark tan. or pink spots in color, with a reddish undertone that can darken when the patient is overheated, such as in a hot shower or during/after exercise.
- Pale patches may be more common in darker skin; this appearance is known as pityriasis versicolor alba and is less likely to feel itchy.
- The pale type of pityriasis versicolor also generally clears up with treatment and the skin color turns normal with sun exposure.
- However, occasionally some white marks become permanent persist long after the infection is gone and the skin has been exposed to the sun.

(18) (D) Topical antibiotic.

- Topical antibiotics such as metronidazole and azelaic acid are considered as the first-line therapies in mild to moderate acne rosacea due to the safety and efficacy.
- Other agents, such as sulfacetamide-sulfur, also may be beneficial.
- Patients who present with numerous inflammatory papules or pustules, or those with milder disease that fails to respond to one or more topical therapies may benefit from oral antibiotic therapy as well.
- Tetracyclines are the best studied agents in this regard.
- Tetracycline, doxycycline and minocycline have been used for many years for the management of papulopustular rosacea.
- Alternate treatments for papulopustular rosacea include laser therapy, intense pulsed light and photodynamic therapy, but the efficacy of these therapies remains uncertain.

(19) (A) Doxycycline.

- Chlamydia trachomatis is highly susceptible to tetracyclines and macrolides treatment.
- Within these 2 classes, first-line treatment is done by oral form of doxycycline and azithromycin, respectively.
- Ideally, sex partners of persons with chlamydial infection should be examined, tested for both Chlamydia trachomatis and Neisseria gonorrhoeae, treated and counseled for prevention, if applicable.

(20) (B) Secondary Syphilis.

- Syphilis is a sexually transmitted infection.
- There are four stages of the disease: primary, secondary, latent and tertiary.
- The symptoms of secondary syphilis develop 2-8 weeks after a person first becomes infected with primary syphilis.
- The secondary stage is usually marked by a non-itchy rash, either to one part of the body, or it could spread over several parts.
- The appearance of the rash varies.
- One common manifestation is rough, reddish-brown dots on the bottoms of feet and on the palms.
- Usually, the rash feels scaly, but it could also be smooth.
- Sometimes, the rash looks like one caused by another disease, making diagnosis difficult. It may also sometimes be very faint and can be overlooked.
- Other symptoms of secondary syphilis include: sore throat, fever swollen lymph glands, headaches, hair loss, weight loss, fatigue, muscle aches, wart-like patches around skin folds or genitals, loss of appetite, joint pain and changes in vision.

(21) (A) Contact dermatitis.

Vaginal itching and itching around the thighs can be due to contact dermatitis to the material of the clothing fabrics, soap, lotions, chemicals, detergents, poison ivy and medications.

- The length of the contact time affects the extent of skin damage.
- Mild irritants such as detergents often require multiple exposures before symptoms appear, but strong irritants such as drain cleaners can produce symptoms immediately.

(22) (D) Cold urticaria and angioedema.

- Urticaria, also known as hives or nettle rash, affects about 20% of people at some point in their lives.
- The short-lived swellings of urticaria are known as weals and typically any individual spot will clear within 24 hours although the overall rash may last for longer.
- Angioedema is a form of urticaria in which there is deeper swelling in the skin, which may take longer than 24 hours to clear.
- An affected individual may have urticaria alone, angioedema alone, or both at the same time. Both are caused by the release of histamine from skin mast cells.
- When angioedema occurs in association with urticaria, the 2 conditions can be considered part of the same process.
- When angioedema occurs on its own, different causes need to be considered.

(23) (B) Atopic dermatitis (Eczema).

- In atopic dermatitis or eczema, the skin of a patient reacts abnormally and easily to irritants such as food and environmental allergens.
- Their skin becomes very itchy, leading to scratching, redness and flaky skin.
- It is sometimes called (the itch that rashes) as the itchiness precedes the rash and scratching it repeatedly may cause the rash.

If scratched, the rash may become raw and weepy.

-It most often begins in childhood before 5-year-old and may persist into adulthood.

For some, it flares periodically and then subsides for a time, even up to several years.

- The symptoms of atopic dermatitis or eczema include red, sometimes scaly, dry, extremely itchy rash often starting on the cheeks at 2-6-month-old.
- Most commonly effected areas are on flexor surfaces (creases) of elbows, wrists and knees in children.

(24) (B) It causes hypersensitive skin to the sun.

- Isotretinoin is currently the standard of care for treatment of severe, scarring cystic acne.
- The most common adverse effects of isotretinoin are a transient worsening of acne (lasting 2-3 weeks), dry lips (cheilitis), dry skin and a propensity to sunburn easily.
- Other side effects are rare but include muscle aches and pains (myalgias) as well as headaches.

It is known to cause birth defects due to in utero exposure because of the molecule's close resemblance o retinoic acid, a natural vitamin A derivative, which controls normal embryonic development.

(25) (D) Oral antibiotics.

Acne vulgaris (or simply acne) is a common human skin disease, characterized by areas of skin with seborrhea (scaly red skin), comedones (blackheads and whiteheads), papules (pinheads), nodules (large

(26) (D) Scabies.

- Scabies is an infestation of the skin by the mite *Sarcoptes scabiei* that results in an intensely pruritic eruption with a characteristic distribution pattern.
- The prominent clinical feature of scabies is severe itching, which is often worse at night.
- The pruritus is the result of a delayed type IV hypersensitivity reaction to the mite, mite feces and mite eggs.
- In adults, areas most likely to yield mites are between the fingers, sides of hands, wrists, elbows, axillae, groin, breasts and feet.
- Whereas, palms, soles, or torso may offer the highest yield in infants and young children.

(27) (A) Cyproheptadine.

- Regular antihistamines are not generally effective for the treatment of cold urticaria.
- The antihistamine cyproheptadine has been found to be a useful treatment.

(28) (A) Molluscum contagiosum.

- This is a case of Molluscum contagiosum, with the pearly appearance and the dimple in the center of the bumps.
- It is a viral infection of the skin or occasionally of the mucous membranes, sometimes called water warts and is caused by a type of DNA pox virus, called the molluscum contagiosum.
- Molluscum contagiosum 1-5 millimeters in diameter lesions are flesh-colored, dome-shaped and pearly in appearance. They often have dimpled center.
- They are generally not painful, but they may itch or become irritated.
- Picking or scratching the bumps may lead to further infection or scarring.

(29) (B) Melasma.

- Melasma is an acquired hypermelanosis of sun-exposed areas with unknown pathophysiology.
- In many cases, a direct relationship with female hormonal activity appears to be present because melasma occurs closer to pregnancy and with the use of oral contraceptive pills.
- Chloasma is a synonymous term sometimes used to describe the occurrence of melasma during pregnancy.
- Melasma presents as symmetric hyperpigmented macules, which can be confluent or punctate.
- The cheeks, the upper lip, the chin and the forehead are the most common locations.
- The most important factor in the development of melasma is exposure to sunlight
- For successful management of melasma, a strict avoidance of sunlight is required.

(30) (D) IV corticosteroids and cyclosporine.

- First line therapy for disseminated or localized pyoderma gangrenosum is systemic treatment is the use of corticosteroids and cyclosporine.
- Topical corticosteroids or a calcineurin inhibitor can be sufficient to treat the patients with mild pyoderma gangrenosum (few superficial ulcers).
- In contrast, systemic therapy is typically necessary in patients with more extensive pyoderma

(31) (A) Isotretinoin.

ic acne is the most severe form of acne and systemic therapy with antibiotics or isotretinoin is a powerful medication used to treat severe acne.

(32) (B) Tinea corporis.

- Tinea corporis (also known as ringworm, tinea circinata and tinea glabrosa) is a superficial fungal infection (dermatophytosis) of the arms and legs, however, may occur on any part of the body.
- The same appearances of ringworm may also occur on the scalp (tinea capitis), beard area (tinea barbae) or in the groin region (tinea cruris, known as jock itch or dhobi itch).
- Although it may have a variety of appearances, most easily identifiable features are the raised red rings with a central area of clearing (ringworm).

(33) (B) Keratoacanthoma.

- Keratoacanthoma is a common low grade (unlikely to metastasize or invade) skin tumor that is believed to originate from the hair follicle.
- The defining characteristic of Keratoacanthoma is that it is dome-shaped, symmetrical, surrounded by a smooth wall of inflamed skin and capped with keratin scales and debris.

It always grows rapidly, reaching a large size within days or weeks and if untreated will starve itself of nourishment, necrose (die and heal with scarring).

(34) (A) Squamous cell carcinoma.

- Squamous cell carcinoma is a type of skin cancer which originates from the squamous cell, which are the main part of the epidermis of the skin.
- Squamous cell carcinoma is the second-most common cancer of the skin (after basal cell carcinoma but more common than melanoma).
- It usually occurs in areas exposed to the sun.
- Sunlight exposure and immunosuppression are the 2 major risk factors for squamous cell carcinoma of the skin.

(35) (A) Melanoma.

Melanoma is a malignancy of pigment producing cells (melanocytes) located predominantly in the skin, but also found in the eyes, ears, gastrointestinal tract, leptomeninges and mucous membranes.

- ABCDE criteria for a changing mole have been used for clinician and patient education regarding the warning signs of early melanoma (particularly the superficial spreading subtype).

These criteria for a changing mole are as follows: Asymmetry (half the lesion does not match the other half) + Border irregularity (the edges are ragged, notched, or blurred) + Color variation (pigmentation is not uniform and may display shades of tan, brown, or black; white, reddish, or blue discoloration is of particular concern) + Diameter (greater than 6 mm is characteristic, although some melanomas may be smaller in size; any growth in a nevus warrants an evaluation) + Evolving (changes in the lesion over time are characteristic; this factor is critical for nodular or amelanotic (non-pigmented melanoma, which may not exhibit the ABCDE criteria).

(36) (B) Methotrexate.

- A variety of systemic medications are used for the treatment of psoriasis, particularly for patients with more than 10% body surface area involvement or less extensive, but debilitating disease.
- Options for systemic therapy include immunosuppressive or immunomodulatory drugs such as methotrexate, cyclosporine and biologic agents.

- Systemic retinoids, which improve psoriasis through effects on epidermal proliferation and differentiation as well as immune modulation are also used for the treatment of this condition

(37) (A) Atopic dermatitis.

Atopic dermatitis is a common potential debilitating condition that can reduce the patient's quality of life.

- Its most frequent symptom is pruritus (a form of itching).
It attempts to relieve the itch by scratching, which may worsen the rash and create a vicious circle.
- Treatments should be directed at limiting itching, reducing the skin and decreasing inflammation when necessary.
- Lubricants, antihistamines and topical corticosteroids are the commonly used therapies.
- Patients with atopic dermatitis include a family history of allergic conditions, early onset of disease, or coexisting allergic rhinitis or asthma.
- From 50-80% of patients with atopic dermatitis eventually develop bronchial asthma or allergic rhinitis.

(38) (D) All of the above.

Isotretinoin is a form of vitamin A and is used to treat severe nodular acne.

Isotretinoin is an oral drug used for the treatment and prevention of severe acne.

- The most common side effects of isotretinoin are dry skin, itching, dry nose, nosebleeds (epistaxis), cracks in the corners of the mouth (chilitis), dry mouth and inflammation of the whites of the eyes.
- It is harmful to the fetus and therefore should not be used during pregnancy.

(39) (A) Erythrasma.

- Erythrasma is a skin disease that causes brown scaly skin patches.

It is caused by the Gram-positive bacteria *Corynebacterium minutissimum*.

The diagnosis can be made from the clinical picture alone.

However, simple side-room investigation with a Wood's lamp is additionally useful in diagnosing erythrasma.

- The ultraviolet light of a Wood's lamp causes the bacteria to fluoresce a coral red color, differentiating it from other bacterial infections and other skin conditions.

(40) (B) Selenium sulfide.

- This is a case of pityriasis versicolor.
- Patients with hypopigmented tinea versicolor often notice that the disorder is most prominent during the summer, when the affected areas fail to tan after sun exposure.
- Selenium sulfide is a topical medication which is frequently prescribed for this condition. It shows antifungal activity and promotes shedding of the infected stratum corneum.

(41) (A) Retinoic acid.

- Retinoids are a group of medicines structurally similar to vitamin A and are often used in preventing several types of acne lesions.
- Topical retinoids are effective in treating the non-inflammatory types of acne (blackheads and whiteheads).

(42) (6) Antifungal cream.

is is a case of tinea cruris which is an infection of the groin caused by a fungus.

Treatment with an antifungal cream usually works well. Fungus from an athlete's foot infection can spread to the groin through clothing, tight, restrictive clothing, such as jockstraps, traps heat and moisture, providing an ideal environment for the fungus.

(43) (A) Multiforme.

Erythema multiforme is a hypersensitivity reaction usually triggered by infections, most commonly by herpes simplex virus.

presents with a skin eruption characterized by a typical target (iris) lesion. It is acute and self-limiting, usually resolves without complications.

(44) (A) Tuberculoid.

Tuberculoid leprosy is characterized by a vigorous cellular immune response, limited humoral immune responses to *Mycobacterium leprae*, usually involving the skin and nerves and resulting in few lesions. The loss of sensation is a feature of tuberculoid leprosy unlike lepromatous leprosy, in which sensation is preserved.

(45) (B) Peroxide plus topical antibiotics.

Main topical antibiotics used for the treatment of acne are clindamycin or erythromycin. Below is the treatment summary for acne:

Mild acne: topical clindamycin, erythromycin; benzoyl peroxide, topical retinoids.

Moderate acne: the above regimen plus oral antibiotics such as tetracycline. Severe

nodulocystic acne: oral isotretinoin.

(46) (D) Bullous pemphigoid.

Bullous pemphigoid is a chronic autoimmune, subepidermal blistering skin disorder. Direct immunofluorescence is the method most commonly used for the diagnosis. IgG levels may be up in 90% of the patients and C3 deposition in nearly 100% of patients.

(47) (C) Doxycycline.

Doxycycline may be prescribed for this patient.

If an antibiotic ointment has been prescribed, this should be applied after the warm compresses and eyelid cleaning.

The precise mechanism of action by which doxycycline treats blepharitis and rosacea is not known but they are thought to alter the nature of the oily secretions produced by the glands in the eyelids making them less toxic to the surface of the eye.

(48) (A) Topical antifungal.

Athlete's foot is a fungal infection of the foot caused by a type of parasite on the skin called dermatophyte.

There are many topical antifungal drugs which can be used for the treatment of athlete's foot. These include miconazole nitrate, clotrimazole, tolnaftate (a synthetic thiocarbamate), terbinafine hydrochloride, butenafine Hydrochloride and undecylenic acid. For severe or refractory cases of athlete's foot, oral terbinafine is more effective than griseofulvin.

(49) (A) Androgenetic alopecia.

- Androgenic alopecia is hair loss that occurs due to an underlying susceptibility of hair follicles to androgenic miniaturization.
- The onset of androgenetic alopecia is gradual.
- Men present with gradual thinning in the temporal areas producing a reshaping of the anterior part of the hairline.
- Women with androgenetic alopecia usually present with diffuse thinning on the crown.
- Bi-temporal recession does occur in women but usually to a lesser degree than in men.
- In general, women maintain a frontal hairline.

(50) (A) Seborrheic dermatitis.

- Seborrheic dermatitis is a condition that can affect infants and cause yellow crusty greasy scaling and may eventually coalesce to a thick, scaly layer.
- The condition is not usually itchy and the child is not distressed by it.
- This is most frequently found on the scalp and when confined to the scalp is known as cradle cap.
- In the majority of cases it is a benign self-limiting condition which usually clears spontaneously during the first 6-12 months of life. In a small number of patients, it can persist longer and may require treatment.
- Cradle cap is very common and usually appears within the first few weeks of life.

(51) (A) Chronic angioedema and urticaria.

- Urticaria and angioedema are commonly classified by duration, lesions of less than 6 weeks duration are considered acute; episodes that persist beyond 6 weeks are designated chronic.
- Chronic urticaria and angioedema is diagnosed when hives and swelling are present for more than 6 weeks and when it has been determined that an apparent protracted episode of urticaria is not the result of recurrent episodes of acute urticaria.
- Angioedema may involve the face, lips, tongue, throat, or extremities.

(52) (B) Progressive enlarging mass.

- In their early stages soft tissue sarcomas usually do not cause any symptoms
- Because soft tissue is relatively elastic tumors can grow rather large, pushing aside normal tissue, before they cause any problems.
- The first noticeable symptom is usually a painless lump or swelling
As the tumor grows, it may cause other symptoms, such as pain or soreness

(53) (A) Ketoconazole cream.

- This is a case of seborrheic dermatitis, which is an inflammatory skin disorder affecting the scalp, face and torso.
- Typically, seborrheic dermatitis presents with scaly, flaky, itchy and red skin.
- It particularly affects the sebaceous-gland-rich areas of skin.
In adolescents and adults, seborrheic dermatitis usually presents as scalp scaling similar to dandruff or as mild to marked erythema of the nasolabial fold.
Application of ketoconazole cream twice daily over skin has been shown to improve seborrheic dermatitis

(54) (C) Oral acyclovir.

- This is a case of Herpes zoster.
- Herpes zoster (or simply zoster), commonly known as shingles or zona, is a viral disease characterized by a painful skin rash with blisters in a limited area on one side of the body (left or right), often in a stripe.
- Oral acyclovir (5 times/day) has been shown to shorten the duration of signs and symptoms, as well as to reduce the incidence and severity of herpes zoster ophthalmicus complications.

(55) (C) Herpes zoster.

- In herpes zoster, the pain and rash most commonly occurs on the torso, but can also appear on the face, eyes or other parts of the body.
- At first the rash appears similar to the first appearance of hives; however, unlike hives, herpes zoster causes skin changes limited to a dermatome, normally resulting in a stripe or belt-like pattern that is limited to one side of the body and does not cross the midline.

(56) (C) Scarlet fever.

Scarlet fever (scarlatina) is a syndrome characterized by exudative pharyngitis, fever and scarlatiniform rash.

- It is caused by toxin-producing bacterium called group A beta-hemolytic streptococci found in secretions and discharge from the nose, ears, throat and skin.
- The symptoms of scarlet fever begin with a sore throat, a fever of 38.2-40°C and headache.
- This is followed within 24 hours by a red rash covering the trunk, arms and legs.
- The rash is slightly raised, which makes the skin feel like fine sandpaper.

It may be associated too, with a pale area around the mouth.

- This redness will disappear in 3-5 days, leaving peeling skin in the areas where the rash was most intense (neck, underarms, groin, fingers and toes).

The patient may also have a white coated, followed by reddened tongue and mild abdominal pain.

- Very rarely, the streptococcus bacteria in the throat can lead to glomerulonephritis, or inflammation of the kidneys, causing blood to appear in the urine and sometimes high blood pressure.

(57) (C) Inner wrists, the forearms and the ankles.

Lichen planus is a cell mediated immune response of unknown origin.

- It may be found with other diseases of altered immunity, such as ulcerative colitis, alopecia areata, vitiligo, dermatomyositis, morphea, lichen sclerosis and myasthenia gravis.

It is often associated with hepatitis C and HIV.

- The most common areas involved are the inner wrists, the forearms and the ankles, chronic active hepatitis and primary biliary cirrhosis.

It is a chronic condition and may be found in patients who do not have skin involvement.

(58) (C) Antifungal cream.

A typical red rash often develops under the folds of the skin (under breasts, groin, etc) rash is usually sore and itchy.

Small blister-like swellings may develop on the rash, on scale can accumulate on the rash to produce a white-yellow, curd-like substance over the affected area.

Antifungal cream usually clears the infection within a week or so.

(59) (C) Atopic dermatitis (Eczema).

Atopic dermatitis often has bronchial asthma or seasonal allergies.

- **There is a family history of allergies such as bronchial asthma, hay fever or eczema**
- **People with atopic dermatitis often test positive for allergic skin tests.**
- **However atopic dermatitis is not caused by allergies**

(60) (B) Melasma.

Melasma is an acquired hypermelanosis of sun-exposed areas

- **Melasma presents as symmetric hyperpigmented macules, which can be confluent or punctate.**
- **The cheeks, the upper lip, the chin and the forehead are the most common sites.**
- **The precise etiology of melasma is unknown but sex hormones may be involved as it tends to occur in women during pregnancy or those taking oral contraceptive pills**

(61) (C) Oral acyclovir and prednisolone.

- **Herpes zoster usually presents as a painful rash and is a common diagnosis in the ER.**
- **It is caused by the reactivation of the varicella zoster virus.**
- **In addition to skin or mucosal involvement, varicella zoster virus reactivation commonly affects the ophthalmic division of the trigeminal nerve and subsequently the eyes, which is termed as herpes zoster ophthalmicus.**
- **Acyclovir and other similar antivirals have been shown to significantly decrease adverse outcomes related to herpes zoster ophthalmicus if started within 72 hours of initial symptoms.**
- **Steroids (topical and systemic) may also play a role in the treatment of herpes zoster ophthalmicus.**
- **In some studies systemic steroids have been shown to speed skin healing and to decrease initial pain; however, there have been no definitive study which shows a successful cure of post-herpetic neuralgia or other complications.**

(62) (B) Diaper dermatitis.

- **Diaper dermatitis with secondary bacterial or fungal involvement tends to spread to concave surfaces (e.g. skin folds), as well as convex surfaces and often exhibits a central red, beefy erythema with satellite pustules around the border.**
- **It is usually considered a form of irritant contact dermatitis.**
- **Despite the word (diaper) in the name, the dermatitis is not due to the diaper itself, but to the materials trapped by the diaper (usually feces).**
- **Allergic contact dermatitis has also been suggested for this etiology.**
- **The term diaper candidiasis is used when a fungal origin is identified.**
- **The distinction is critical, because the treatment (antifungals) is completely different.**

(63) (B) Inflammatory acne.

- **Inflammatory acne (papules, infected pustules, or nodules) in the dermis around the microcomedo or comedone lead to redness and may result in scarring or hyperpigmentation.**
- **Acne may be classified as mild, moderate or severe**

(64) (A) Topical tretinoin and clindamycin.

Acne vulgaris (commonly known as acne) is a common human skin disease, characterized by areas of skin with seborrhea (oily / red skin), comedones (blackheads and whiteheads), papules (pinheads), nodules (large papules), pimples and possibly scarring.

Clindamycin phosphate together with tretinoin as a gel is a topical formulation of a fixed and stable combination for the treatment of acne vulgaris in patients 12-year-old or older.

Clindamycin phosphate together with tretinoin as a gel is used for the management of moderate comedonal and mild-to-moderate papulopustular acne, a type which is present in more than 50% of the patients.

(65) (A) Retinoic acid.

Retinoic acid is a chemical compound that is widely prescribed to treat chronic acne that is refractory to other antibiotic therapies and topical drugs.

Oral retinoic acid for acne scar treatment is very effective and decreases acne breakouts; almost 90% chronic acne responds to the oral capsules of vitamin A.

(66) (A) Impetigo.

Impetigo is a highly contagious bacterial skin infection most common among pre-school children, which generally appears as honey-colored scabs formed from dried serum and is often found on the arms, legs, or face.

(67) (A) Axillary freckling.

Café au lait spots can be seen in patients with neurofibromatosis type 1, a genetic disorder characterized by multiple large café au lait spots and axillary freckling (freckling on the skin, tumors (called fibromas) on the skin, in the muscles, on the nerves, along the spine and in the brain along with vision problems, macrocephaly, cognitive delays and learning disorders, epilepsy, scoliosis and fine and gross motor development delays, the key early diagnosis of mild neurofibromatosis is the appearance of café au lait spots on the skin.

(68) (A) Pellagra.

Pellagra is clinically manifested by the 4 Ds: photosensitive Dermatitis, Diarrhea, Dementia and Death, the full tetrad of symptoms is usually not well developed in infants and children, but vitamin deficiency responds to treatment with nicotinic acid.

(69) (A) Clindamycin.

Treatment of rosacea: oral tetracyclines and topical metronidazole or topical erythromycin or topical clindamycin.

In severe cases, isotretinoin can also be used, surgical treatment is sometimes needed for rhinophyma.

(70) (B) Lichen planus.

Lichen planus is a skin condition of unknown origin that produces small, shiny, flat-topped, itchy pinkish-purple raised spots on the wrists, forearms or lower legs, especially in middle-aged patients, the backs of the hands are also frequently involved, there are pruritic purple shiny flat-topped papules and plaques to be seen.

(71) (D) Angular cheilitis.

- Angular cheilitis is an inflammatory lesion at the labial commissure (corner of the mouth) and often occurs as deep cracks or splits on both sides.
- In severe cases, the splits can bleed when the mouth is opened and shallow ulcers or a crust may form.
- It may be caused by nutritional deficiencies, fungal infections, or less commonly bacterial infections.
- Treatment for angular cheilitis varies based on the cause of the condition.

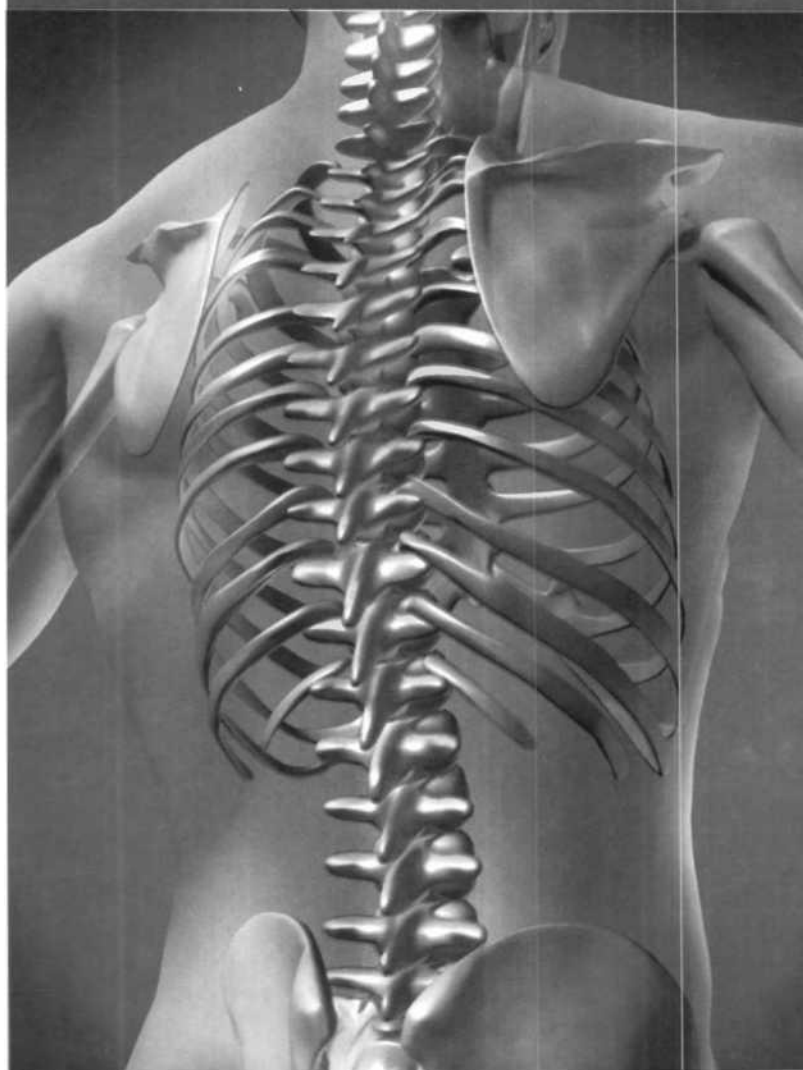
(72) (B) Cryotherapy.

- Cryotherapy a minimally invasive treatment that uses extreme cold to freeze and destroy diseased tissue, such as skin tumors, pre-cancerous skin moles, nodules, skin tags, unsightly freckles, retinoblastomas, a childhood cancer of the retina.
- Cryotherapy can be applied topically (on the skin surface), percutaneously, or surgically.

(73) (A) Doxycycline.

- This is a case of rosacea, which typically begins as redness on the central face across the cheeks, nose, or forehead, but can also less commonly affect the neck, chest, ears and scalp.
- In some cases, additional symptoms, such as semi-permanent redness, telangiectasia (dilation of superficial blood vessels on the face), red domed papules (small bumps) and pustules, red gritty eyes, burning and stinging sensations and in some advanced cases, a red lobulated nose (rhinophyma), may develop.

ORTHOPEDIC



- (1) A child is diagnosed with spiral fracture of the arm. What is the treatment?
- (A) Open reduction and internal fixation.
 - (B) Conservative management.
 - (C) Refer to pediatrics.
 - (D) Splinting.
- (2) A positive Lachman test indicates injury in which of the following?
- (A) Anterior cruciate ligament tearing.
 - (B) Posterior cruciate ligamenttearing.
 - (C) Medial collateral ligament tearing.
 - (D) Lateral collateral ligament tearing.
- (3) A patient with a known case of epilepsy presented with left shoulder pain. On examination, there is a flattened contour of the shoulder, fixed adduction with internal rotation. What is the diagnosis?
- (A) Inferior dislocation.
 - (B) Subacromal posterior dislocation.
 - (C) Anterior subglenoid dislocation.
 - (D) Anterior subclavicular dislocation.
- (4) A falling down on out stretch hand will lead to which of the following?
- (A) Colles' fracture.
 - (B) Scaphoid fracture.
 - (C) Wrist dislocation.
 - (D) Chauffeur's fracture.
- (5) Which of the following is the presentation of posterior hip dislocation?
- (A) Flexion, adduction and internal rotation.
 - (B) Flexion, abduction and external rotation.
 - (C) Extension, adduction and internal rotation.
 - (D) Extension, abduction and external rotation.
- (6) A 30-year-old woman presented with sharp pain in the index finger. It increases with the use of scissors or nail cutters, leading to sharp pain at the base of the finger. The finger had become directed downward and causes pain when she tries to extend the finger. What is the diagnosis?
- (A) Trigger finger.
 - (B) Tendon nodule.
 - (C) Dupuytren contracture.
 - (D) Mallet finger.
- (7) What is the cause of olecranon bursitis of the elbow joint?
- (A) Repeated elbow trauma.
 - (B) Auto immune disease.
 - (C) Rupture of bursa.
 - (D) Infection by Staphylococcus aureus.

- (8) What is the cause of tibial tubercle pain in a 13-year-old boy who is having growth spurt?
- (A) Osgood Schlatter disease.
 - (B) Stress fracture.
 - (C) Knee osteochondritis dissecans.
 - (D) Pes anserine bursitis.
- (9) A young boy presented with persistent pain after running for long a distance. On examination, there is knee swelling. Investigation shows x-ray of the knee is normal. What is the diagnosis?
- (A) Ligament tearing.
 - (B) Tibial fracture.
 - (C) Ischemia.
 - (D) Patellar tendinitis.**
- (10) A young adult who is a squash player presented with pain on the lateral elbow and tingling of lateral arm. What is the diagnosis?
- (A) Carpal tunnel syndrome.
 - (B) Tennis elbow.
 - (C) Osteoarthritis.
 - (D) Bursitis.
- (11) A male patient who is a carpenter and uses a hammer a lot in his work presented with pain in his right elbow. What is the diagnosis?
- (A) Lateral epicondylitis.
 - (B) Medial epicondylitis.
 - (C) Bursitis.
 - (D) Osteoarthritis.
- (12) A child fell down on his elbow. What is the finding in lateral x-ray?
- (A) Anterior pad sign.
 - (B) Posterior pad sign.
 - (C) Anterior line of humerus intersecting the cubitium.
 - (D) Radial line forming 90 degree with cubitium.
- (13) What is the most common cause of pain in anatomical snuffbox?
- (A) Boxer fracture.
 - (B) Colles' fracture.
 - (C) Scaphoid fracture.
 - (D) De Quervain's tenosynovitis.
- (14) Regarding a newborn with mid-clavicle fracture, one of the following is correct?
- (A) Surgery is always indicated if fracture is displaced.
 - (B) Figure-8-dressing has better outcomes than simple sling.
 - (C) Both figure-8 and simple sling has similar outcomes.
 - (D) Healing generally occurs spontaneously without complications.

(15) Which of the following is associated with fracture of humerus at the lateral aspect?

- (A) Radial nerve injury.
- (B) Median nerve injury.
- (C) Ulnar nerve.
- (D) All of the above.

(16) What is the treatment of an open tibial fracture?

- (A) Cephazolin.
- (B) Cephazolin and gentamicin.
- (C) Gentamicin.
- (D) Cephazolin, gentamicin and metronidazole.

(17) A 4-year-old boy fell down and his mother pulled him by his arm. Since then he keeps his arm in a pronated position. What is the management?

- (A) Splint.
- (B) X-ray the arm before any intervention.
- (C) Orthopedic surgery.
- (D) Observation.

(18) What is the manifestation in patient with disc prolapse at level L4?

- (A) Loss of ankle jerk.
- (B) Fasciculation of posterior calf muscles.
- (C) Loss of dorsiflexion compartment of the foot.
- (D) Loss of the sensation of the groin and anterior aspect of the thigh.

(19) What is the useful exercise for osteoarthritis in the elderly to maintain muscle strength and bone density?

- (A) Low resistance and high repetition muscle training.
- (B) Conditioning and low repetition muscle training.
- (C) Walking and endurance muscle training.
- (D) Low resistance and conditioning muscle training.

(20) What is the initial management for a patient with osteoarthritis?

- (A) Intra-articular corticosteroid.
- (B) Quadriceps strengthening exercise.**
- (C) Climb stairs exercise.
- (D) Local analgesic cream.

(21) A young adult presented with buttock pain and lower back pain which is relieved by activity. What is the main line of treatment?

- (A) Physical therapy and exercise, along with medication.
- (B) Medication.
- (C) Physical therapy.
- (D) Surgery.

(22) What is the mechanism of destruction of joint in rheumatoid arthritis?

- (A) Swelling of synovial fluid.
- (B) Anti-inflammatory cytokines attacking the joint.
- (C) Bacteria invades the joint.
- (D) Accumulation of uric acid or urate in blood and tissues.

(23) An elderly patient presented with complaining of back pain on walking. On examination, there was stiffness of the muscle. By investigation, x-ray shows moderate spondyloarthropathy. What is the most effective treatment?

(A) Physiotherapy.

- (B) NSAIDs.
- (C) Surgery.
- (D) Bed rest.

(24) A patient presented with complaining of a pain on the bottom of the foot near the heel after getting out of bed in the morning, which increased with movement. What is the diagnosis?

- (A) Achilles tendinitis.
- (B) Tendon fasciitis.
- (C) Anterior ankle impingement.
- (D) Tarsal tunnel syndrome.

(25) A female patient presented with neck pain and occipital headache with no other symptoms. By investigation, x-ray shows cervical spine osteophytes and narrow discs. What is the diagnosis?

- (A) Cervical spondylosis.
- (B) Cervical disc disease.
- (C) Chronic pain syndrome.
- (D) Rheumatoid arthritis.

(26) A 45-year-old female presented to ER with acutely swollen knee and ballottement patella after a knee injury. Which of the following is the next step to be done?

- (A) MRI of the knee.
- (B) Aspiration.
- (C) CBC.
- (D) Rheumatoid factor.

(27) A patient with a known case of diabetes mellitus with poor control presented with right knee pain and ballottement. What is the management?

- (A) Incision and drainage.
- (B) Oral antibiotic.
- (C) Aspiration.
- (D) Reassurance and observation.

(28) An elderly man presented with complaining of bilateral knee pain, swelling and tenderness, which were increased with walking and relieved by rest. There is no history of trauma. On examination, there is limited range of movement with crepitus and atrophy of quadriceps muscle. By investigations, lab tests revealed normal ESR and CRP; x-ray showed narrow joint space and subchondral sclerosis. What is the diagnosis?

- (A) Rheumatoid arthritis.**
- (B) Osteoarthritis.**
- (C) Ankylosing spondylitis.**
- (D) Gout.**

(29) A patient with a known case of diabetes mellitus presented with limited or decreased range of movement, passive and active, of all directions of shoulder. What is the diagnosis?

- (A) Frozen shoulder.**
- (B) Impingement syndrome.**
- (C) Osteoarthritis.**
- (D) TB of the shoulder joint.**

(30) A 48-year-old male patient presented complaining of lower back pain with morning stiffness for 30 minutes. On examination, he was having spasm centrally on the lower back. What is the appropriate management?

- (A) Epidural steroid injection.**
- (B) Back brace.**
- (C) Physiotherapy.**
- (D) None of the above.**

(31) A mother presented complaining of sharp pain in the radial styloid when carrying her baby. The pain increases with extension of the thumb against resistance. On examination, the Finkelstein test was positive. What is the diagnosis?

- (A) Osteoarthritis of radial styloid.**
- (B) De Quervain tenosynovitis.**
- (C) Osteoarthritis of the first carpometacarpal joint.**
- (D) Tendinitis of the wrist extensors.**

(32) A young male patient presented complaining of morning stiffness of the back, which was relieved with activity and manifestations of uveitis. What is the diagnosis?

- (A) Ankylosing spondylitis.**
- (B) Rheumatoid arthritis.**
- (C) Reactive arthritis.**
- (D) Psoriatic arthritis.**

(33) What is the most common site for osteomyelitis?

- (A) Epiphysis.**
- (B) Diaphysis.**
- (C) Metaphysis.**
- (D) Blood flow.**

- (34) An athlete man presented to ER complaining of pain in the foot while walking. On examination, there is tenderness in the planter of the foot. What is the diagnosis?
- (A) Plantar fasciitis.
 - (B) Hallux valgus.
 - (C) Hallux rigidus.
 - (D) Calcaneal bursitis.
- (35) A middle-aged very obese patient is newly diagnosed with knee osteoarthritis. What is the initial management?
- (A) Intra-articular corticosteroid.
 - (B) Weight reduction.
 - (C) Exercise.
 - (D) Strengthening of quadriceps muscle.
- (36) An elderly male patient complains of bilateral knee pain with mild joint stiffness in the morning. The pain increases with movement and decreases with rest. By investigations; ESR and CRP are normal. What is the diagnosis?
- (A) Osteoarthritis.
 - (B) Rheumatoid arthritis.
 - (C) Gout.
 - (D) Osteoporosis.
- (37) Which of the following is true regarding dermatomyositis?
- (A) Patient presents with proximal muscle weakness.
 - (B) Patient presents with proximal muscle tenderness.
 - (C) Patient presents with distal muscle weakness.
 - (D) Patient presents with distal muscle tenderness.
- (38) What is the most common treatment for juvenile rheumatoid arthritis?
- (A) Intra-articular injection of steroids.
 - (B) Oral steroids.
 - (C) Acetaminophen.
 - (D) Aspirin.
- (39) A patient with a known case of hypertension for 5 years and is on thiazide presented to ER at midnight screaming and holding his left foot. On examination, the patient was afebrile. The left foot was tender and erythematous. The most tender and painful site was the big toe and there was no other joint involvement. What is the diagnosis?
- (A) Cellulitis.
 - (B) Gouty arthritis.
 - (C) Septic arthritis.
 - (D) Rheumatoid arthritis.

(40) An elderly man presented with mid-back pain but is not known to have any medical illness. He is taking only aspirin, calcium and multivitamins. He is not taking dairy products. On examination he has tenderness in the mid-back with mild kyphosis. By investigations, x-ray shows compression fracture in one of thoracic vertebrae. What is the diagnosis?

- (A) Osteopenia.
- (B) Osteoporosis.
- (C) Osteomalacia.
- (D) Hyperparathyroidism.

(41) A patient is diagnosed with osteopenia in the femur. By investigations, lab results shows increase serum alkaline phosphatase, normal serum calcium, normal phosphate and normal vitamin D. What is the treatment?

- (A) Estrogen receptor modulator.
- (B) Calcium regulator.
- (C) Bisphosphonate.
- (D) Cinacalcet.

(42) What is the best exercise to increase muscle strength and bone density during the aging process?

- (A) Low resistance and high repetition muscle training.**
- (B) Conditioning and low repetition muscle training.
- (C) Walking and endurance muscle training.
- (D) Low resistance and conditioning muscle training.

(43) A 42-year-old man with a known case of Cushing syndrome presented with a bone fracture. What should he be investigated for?

- (A) Osteomyelitis.
- (B) Osteoarthritis.
- (C) Osteoporosis.
- (D) Osteomalacia.

(44) What is the most common non-traumatic fracture caused by osteoporosis?

- (A) Codes fracture.
- (B) Femoral fracture.
- (C) Vertebral compression fracture.
- (D) Scaphoid fracture.

(45) An elderly female patient is diagnosed with osteoporotic thoracic. By investigations, she has a T score -3.5. What is the diagnosis?

- (A) Osteoporosis.
- (B) Osteopenia.
- (C) Severe osteopenia.
- (D) Established osteoporosis.

(46) Regarding the following pelvic x-ray. What is the diagnosis?

- (A) Osteoporosis.
- (B) Ankylosing spondylitis.
- (C) Paget disease of the bone.
- (D) Pathologic fracture.



(47) What is the definition of osteomalacia?

- (A) Failure of mineralization.
- (B) Reduced bone mineralization density.
- (C) Decrease in bone mass and density.
- (D) Increase bone resorption, bone formation and remodeling.

(48) A 58-year-old female with a known case of osteopenia asks about the best way to prevent compression vertebral fracture. What is the best management?

- (A) Avoid obesity.
- (B) Vitamin D and calcium supplement.
- (C) Weight bearing exercise.
- (D) Progesterone.

(49) An 80-year-old male worked as a carpenter but is now retired. He presented to the hospital complaining of pain in his left shoulder. He cannot sleep on his left side because of it and cannot raise his hand up. On examination, there is limited range of motion. By investigations, x-ray showed osteopenia. What is the diagnosis?

- (A) Osteoporosis.
- (B) Adhesive capsulitis.
- (C) Sub-acromial bursitis.
- (D) Biceps muscle tear.

(50) What is the cause of primary osteoporosis?

- (A) Decrease vitamin D intake.
- (B) Aging process.
- (C) Decrease calcium intake.
- (D) Lack of exercise.

(51) What is the most important exogenous risk factor for osteoporosis?

- (A) Alcohol intake.
- (B) Age.
- (C) Smoking.
- (D) Lack of exercise.

(52) What is the treatment of avascular necrosis in children?

- (A) Physical therapy.
- (B) Surgical options.
- (C) Both A and B.

(53) What is the treatment for recurrent gout?

- (A) Ailopurinol.**
- (B) Probenicid.**
- (C) Corticosteroid.**
- (D) Colchicine.**

(54) A male patient presented with severe pain on his big toe with knee pain. By investigation, birefringent crystals negative. What is the etiology?

- (A) Uric acid deposit secondary to synovial fluid over saturation.**
- (B) Calcium pyrophosphate secondary to synovial fluid over saturation.**
- (C) Deposition of cholesterol crystals.**
- (D) None of the above.**

(55) An elderly patient has had bilateral pain and crepitation of both knees for years. Now he presented with acute right knee swelling. On examination, there is edema over the dorsum and tibia of right leg. What is the best investigation for this condition?

- (A) Right limb venogram.**
- (B) X-ray.**
- (C) US.**
- (D) CT.**

(56) An older child presented with complaining of a pain in the hip and groin area, stiffness and a reduced range of movement. By investigations, bilateral hip x-rays show femoral head collapse and fragmentation. What is the appropriate management?

- (A) Physiotherapy.**
- (B) Surgery.**
- (C) Non weight bearing for 6 months.**
- (D) Observation.**

(57) Which of the following is true regarding Boutonniere deformity?

- (A) Extension of PIP joint and flexion of DIP joint.**
- (B) Flexion of PIP joint and flexion of DIP joint.**
- (C) Flexion of PIP joint and hyperextension of DIP joint.**
- (D) Extension of PIP joint and extension of DIP joint.**



(58) A child presented with toeing-in and set in W-shape, when he walks, both feet and knee are inward

with 20 degree, also both femurs are inward with rotation 70 degree. What is the diagnosis?

- (A) Metatarsus adductus.**
- (B) Femoral anteversion.**

- (59) A patient is asked to face the wall, bend his waist and let his hands hang down without support. This test is used as a screening tool for which of the following?
- (A) Lower limb asymmetry.
 - (B) Rectal prolapsed.
 - (C) Scoliosis.
 - (D) Lordosis.
- (60) Which of the following is true about allopurinol?
- (A) It is contraindicated in acute gouty arthritis.
 - (B) It increase incidence of uric acid stones.
 - (C) It is a xanthine reductase inhibitor.
 - (D) It cannot be used with colchicines.
- (61) A patient with a known case of osteoarthritis presented with proximal interphalangeal nodules. What is this nodule?
- (A) Heberden's nodes.
 - (B) Bouchard's nodes.
 - (C) Malignant nodule.
 - (D) Kaposi sarcoma.
- (62) Which one of the following crystals found in gout?
- (A) Monosodium urate monohydrate crystals.
 - (B) Calcium crystals.
 - (C) Fluoride crystals.
 - (D) Calcium pyrophosphate crystals.
- (63) Which one of the following crystals found in psuedogout?
- (A) Phosphate crystals.
 - (B) Calcium crystals.
 - (C) Fluoride crystals.
 - (D) Calcium pyrophosphate crystals.
- (64) All of the following can be used for the treatment of acute gout except:
- (A) Allopurinol.
 - (B) Penicillamine.
 - (C) Gold salt.
 - (E) Indomethacin.
- (65) A male patient presented complaining of back pain on walking and stiffness. By investigations, an MRI shows spinal stenosis. What is the initial treatment?
- (A) Physiotherapy.
 - (B) NASIDs.
 - (C) Surgery.
 - (D) Corticosteroid.

(66) What is the treatment of acute gout?

- (A) Allopurinol.**
- (B) NSAIDs.**
- (C) Acetaminophen.**
- (D) Gold salt.**

(67) A patient with a known case of hypertension presented with a severely red, swollen and painful first metatarsophalangeal joint lasting 12 days. By investigations, ECG show inverted T wave. What is the most appropriate next investigation to confirm the diagnosis?

- (A) Uric acid level.**
- (B) Troponin level.**
- (C) CRP.**
- (D) Urine sedimentation test.**

(68) What is the treatment of polymyalgia rheumatica?

- (A) Prednisone.**
- (B) Acyclovir.**
- (C) Antibiotic.**
- (D) Intra-articular injection.**

(69) A patient has a long time history of knee pain suggestive of osteoarthritis. He presented with unilateral lower limb swelling. On examination, there is positive pedal and tibial pitting edema. What is the next appropriate investigation?

- (A) CXR.**
- (B) ECG.**
- (C) Echocardiography.**
- (D) Duplex US of lower limb.**

(70) A patient with a known case of osteoarthritis presents with distal interphalangeal nodules. What is the nodule?

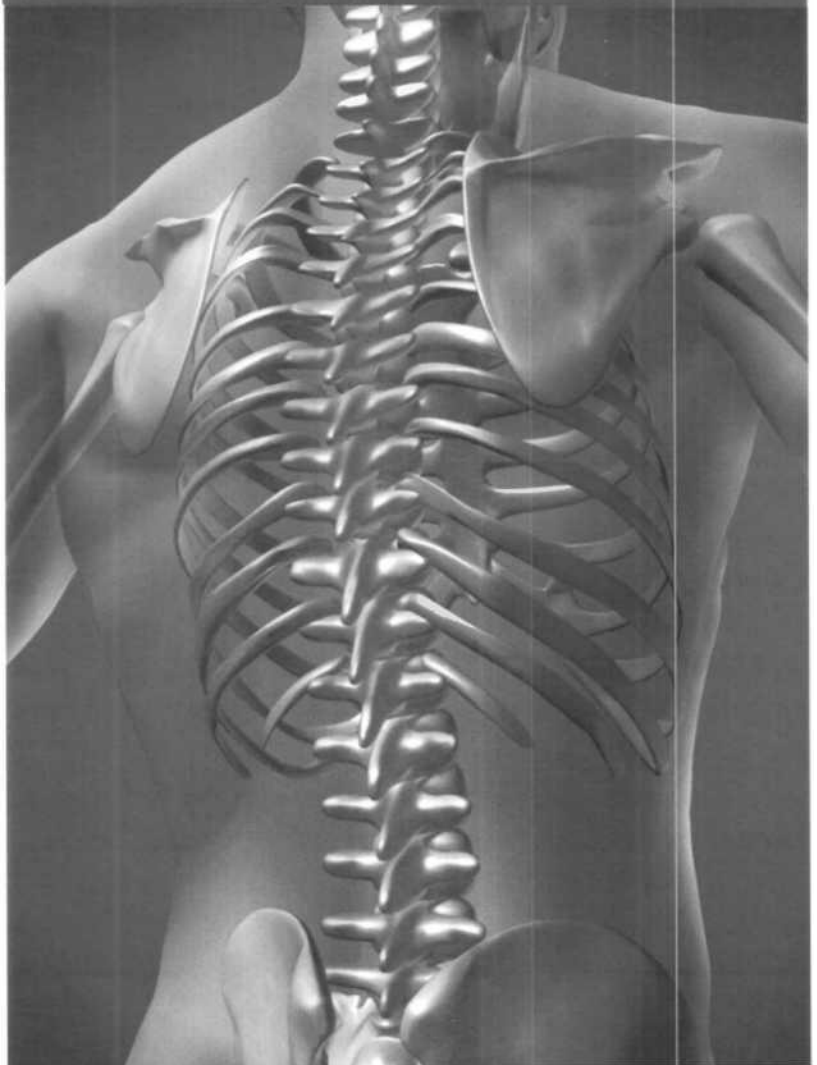
- (A) Heberden's nodes.**
- (B) Bouchard's nodes.**
- (C) Malignant nodes.**
- (D) Kaposi sarcoma.**

(71) A female patient with no known illness had a caesarean section 4 months ago, she presents now with wrist pain. On examination, there is tenderness of the distal to radial styloid, Phalen's test is negative and Finkelstein's test is positive. What is the management?

- (A) Volar splint.**
- (B) Entrapment release surgery.**
- (C) Thumb splint.**
- (D) Corticosteroid.**

ANSWERS

ORTHOPEDIC



(1) (A) Open reduction and internal fixation.

- Surgery to restore broken bones is called open reduction and requires general anesthesia.
- During open reduction, the torsion fracture in the bone is revealed through an incision in the skin.
- Occasionally, especially in children, a spiral fracture will be relatively clean and a closed reduction, or realigning of the fractured bone without surgery, can be performed.
- Closed reduction of a twisting fracture is typically done with local anesthesia, but general anesthesia may also be used.
- If there are no fragments or splinters on the fracture then realigning the bone and casting it can be the best treatment.

(2) (A) Anterior cruciate ligament tearing.

- The Lachman test is an orthopedic test used for examining the anterior cruciate ligament in the knee for patients where there is a suspicion of a torn anterior cruciate ligament.

(3) (B) Subacromial posterior dislocation.

- Posterior dislocations are occasionally due to electric shock or seizure and may be caused by strength imbalance of the rotator cuff muscles.
- Patients typically present holding their arm internally rotated and adducted and exhibiting flattening of the anterior shoulder and a prominent coracoid process.

(4) (A) Colles' fracture.

- A Smith's fracture, also sometimes known as a reverse Colles' fracture is a fracture of the distal radius.
- A Smith's fracture is caused by a direct blow to the dorsal forearm or falling onto flexed wrists, as opposed to a Colles' fracture which occurs as a result of falling onto wrists in extension.
- Smith's fractures are less common than Colles' fractures.

(5) (A) Flexion, adduction and internal rotation.

- A 9 out of 10 hip dislocations are posterior.
- In posterior hip dislocation, the affected leg is shortened and internally rotated with flexion and adduction at the hip.
- This appearance may not occur if there is also a femoral shaft fracture.

(6) (A) Trigger finger.

- Base of the finger means in metacarpophalangeal joint
- Directed downward of the finger means flexion of the distal interphalangeal joint
- Trigger finger (also called stenosing flexor tenosynovitis) is a common disorder characterized by catching, snapping or locking of the involved finger flexor tendon, associated with dysfunction and pain.
- The diagnosis of trigger finger is based primarily upon a history of locking and the physical examination.
- Initially, the patient should be asked to open and close the hand; smooth, painless and complete movement of the affected digit virtually excludes trigger finger.
- Next, the flexor tendons over the metacarpophalangeal joint are palpated for tenderness and

- Clicking or locking with active flexion may or may not be present, depending upon the time of day or upon how long the patient has been symptomatic.

(7) (A) Repeated elbow trauma.

- Olecranon bursitis is a condition characterised by pain, redness and swelling around the olecranon, caused by inflammation of the elbow's bursa.
- Bursitis normally develops as a result either of a single injury to the elbow (e.g. a hard blow to the tip of the elbow), or perhaps more commonly due to repeated minor injuries, such as repeated leaning on the point of the elbow on a hard surface.

(8) (A) Osgood Schlatter disease.

- Osgood Schlatter disease or syndrome (also known as epiphysitis of the tibial tubercle, or knobby knees) is an irritation of the patellar ligament at the tibial tuberosity.
- It is characterized by painful lumps just below the knee and is most often seen in young adolescents.
- Risk factors may include excess weight and overzealous conditioning (running and jumping), but adolescent bone growth is at the root of it.

(9) (C) Ischemia.

- Knee pain usually results from overuse, poor form during physical activity, not warming up or cooling down, or inadequate stretching.
- Runner's knee is not really a condition itself; it is a loose term for several specific disorders with different causes.
- Runner's knee can result from overuse for example.
- Repeated bending of the knee can irritate the nerves of the kneecap.
- Overstretched tendons (tendons are the tissues that connect muscles to bones) may also cause the pain of runner's knee.

(10) (B) Tennis elbow.

- Tennis elbow (lateral epicondylitis) is a condition where the outer part of the elbow becomes sore and tender.
- Since the pathogenesis of this condition is still unknown, there is no single agreed name.
- While the common name (tennis elbow) suggests a strong link to racquet sports, this condition can also be caused by sports such as swimming and climbing, manual labor (such as waiters), playing guitar and similar instruments, as well as activities of daily living.

(11) (A) Lateral epichondylitis.

- Lateral epicondylitis (inflammation of common extensor tendon), also known as tennis elbow, shooter's elbow and archer's elbow, is a condition where the outer part of the elbow becomes sore and tender

(12) (B) Posterior fat pad sign.

- An elevated posterior fat pad visible on a lateral radiograph of a child elbow following trauma is generally considered to be suggestive of an intracapsular fracture about the elbow.

The posterior fat pad is normally pressed into the olecranon fossa by the triceps tendon and hence invisible on lateral radiograph of the elbow.

When there is a fracture of the distal head of the humerus, or other pathology involving the elbow joint, inflammation develops around the synovial membrane forcing the fat pad out of its normal physiological resting place

- This is visible as the (posterior fat pad sign) and is often the only visible marker of a fracture, particularly in the pediatric population

(13) (C) Scaphoid fracture.

Scaphoid fracture is a fracture commonly present with radial-sided wrist pain, tenderness and possible swelling in the anatomical snuffbox and limited range of movement with pain especially at end range. They are often diagnosed by x-rays. However, not all fractures are apparent initially.

Therefore people with tenderness over the scaphoid (those who exhibit pain to pressure in the anatomical snuffbox) are often casted for 7-10 days at which point a second set of x-rays is taken.

Differential diagnosis of pain in the anatomical snuffbox includes De Quervain's tenosynovitis, carpal instabilities and osteoarthritis of the first carpometacarpal joint.

(14) (D) Healing generally occurs spontaneously without complications.

Clavicle is the most frequent injured bone during labor and delivery and accounts for approximately 10% of obstetric fractures. Neonatal clavicle fractures generally heal rapidly and have an overall excellent prognosis

- Generally, there is no treatment other than lifting the child gently to prevent discomfort. The arm on the affected side may be immobilized, most often simply by pinning the sleeve to the clothes.

(15) (A) Radial nerve injury.

Mid-shaft fractures may damage the radial nerve, which traverses the lateral aspect of the humerus, associated with the radial groove

The median nerve is vulnerable to damage in the supracondylar area and the ulnar nerve is vulnerable near the medial epicondyle around which it curves to enter the forearm.

(16) (D) Cephalosporin, gentamicin and metronidazole.

As in all open fracture injuries, the patient must receive anti-tetanus prophylaxis and appropriate antibiotic coverage.

Tetanus should be given IV as soon as possible

General principles for fractures are treated with coverage of typical skin bacteria often a first generation cephalosporin

Higher grade open fracture wounds will require additional coverage for Gram-negative organisms.

With soil or farm injuries high dose penicillin should be added to cover possible clostridial infection

(gas gangrene).

(17) (B) X-ray the arm before any intervention.

Nursemaid's elbow, baby-sitter's elbow or pulled elbow is located on the elbow joint caused by a sudden pull on the extended pronated arm, such as by an adult tugging on an uncooperative child or by swinging the child by the arms.

The technical term for the injury is radial head subluxation.

Anteroposterior and lateral views of the elbow and only if a fracture is suspected.

(18) (C) Loss of dorsiflexion compartment of the foot.

- In prolapsed disc (commonly called a slipped disc), actually does not actually slip.
- What happens is that part of the softer part of the disc (the nucleus pulposus) bulges out (herniates) through a weakness in the outer part of the disc.
- A prolapsed disc is sometimes called a herniated disc.
- 95% involve L4/L5 or L5/S1 levels.
- L5/S1 is the most common level.
- According to the level of injury, the patient will have:

L2: Flexion of the hip.

L3: Extension of the knee.

L4: Dorsiflexion of the ankle.

L5: Dorsiflexion of the toes.

S1: Plantar flexion the ankle and toes.

S2: Flexion of the knee and extension of the hip.

S3, S4, S5: Anal contraction.

(19) (A) Low resistance and high repetition muscle training.

- In prescribing an exercise regime for a patient with osteoarthritis, the use of low resistance with high repetitions (to fatigue) in a motion arc that does not irritate the joint is preferred to high load and low repetitions exercises.

(20) (D) Local analgesic cream.

- Acetaminophen is usually the first line pharmacological treatment for managing osteoarthritis pain.
- Although it can be as effective as NSAIDs in some people, evidence suggests acetaminophen has only a modest effect in reducing pain and no effect on stiffness or function.
- Acetaminophen should be tried first because, although NSAIDs provide better pain relief, acetaminophen has fewer side effects.

(21) (A) Physical therapy and exercise, along with medication.

- This is a case of ankylosing spondylitis.
- Physiotherapy and physical exercises are preceded by medical treatment to reduce the inflammation and pain and are commonly followed by a physician.

(22) (B) Anti-inflammatory cytokines attacking the joint.

- Abnormal production of numerous cytokines, chemokines and other inflammatory mediators has been demonstrated in patients with rheumatoid arthritis.
- Ultimately, inflammation and exuberant proliferation of the synovium leads to destruction of various tissues, including cartilage, bone tendons, ligaments and blood vessels.

Although the articular structures are the primary sites involved by rheumatoid arthritis, other tissues are also affected.

(23) (B) NSAIDs.

Moderate or severe lesions were observed only in patients with inflammatory back pain.

(24) (B) Tendon fasciitis.

Plantar fasciitis is the pathologic cause; by inflammation of the insertion of the plantar fascia on the medial process of the calcaneal tuberosity

The pain may be unilateral, resulting in the alteration of daily activities. Various terms have been used to describe plantar fasciitis, including jogger's heel, tennis heel, policeman's heel, and even gonorrheal heel.

Although a misnomer, this condition is sometimes referred to as heel spurs by the general public.

(25) (A) Cervical spondylosis.

Cervical spondylosis is a chronic degenerative condition of the cervical spine that affects the vertebral bodies and intervertebral disks of the neck

Cervical films can demonstrate disk space narrowing, osteophytosis, loss of cervical lordosis, vertebral body hypertrophy, and osteoarthrosis of the vertebral canal diameter.

(26) (B) Aspiration.

This is a case of gonarthrosis

Arthrocentesis can be used as a diagnostic tool and a therapeutic procedure. Knee swelling that persists after hours of injury is local evidence of gonarthrosis

(27) (C) Aspiration.

Laboratory analysis of joint aspiration may assist in confirming a diagnosis

Aspirate fluid should be analyzed for WBCs, total and differential, and for glucose and protein levels

Gram staining, cultures, and sensitivity testing should be performed

(28) (B) Osteoarthritis.

Osteoarthritis is the result of mechanical and biological events that destabilize the normal process of degradation and synthesis of articular cartilage. Chondrocytes are cells in the articular matrix and subchondral bone

It involves the entire joint, including the articular cartilage, subchondral bone, pericapsular muscles, capsule, and synovium.

When bone surfaces become less protected by cartilage, bone may be exposed and damaged.

As a result of decreased movement, secondary to pain, regional muscles may atrophy and ligaments may become more lax

Physical signs of osteoarthritis are crepitus, decreased range of motion, and pain that worsens with activity and weight bearing but improves with rest.

(29) (A) Frozen shoulder.

Frozen shoulder, medically referred to as adhesive capsulitis, is a disorder in which the shoulder capsule and the connective tissue surrounding the glenohumeral joint of the shoulder becomes inflamed and stiff,

greatly restricting motion and causing chronic pain. Pain is usually constant, worse at night, and when the weather is colder and, along with the restricted movement, can make even small tasks impossible.

(30) (C) Physiotherapy.

- This is a case of ankylosing spondylitis.
- Patients commonly experience morning stiffness lasting at least 30 minutes, improvement of symptoms with moderate physical activity and diffuse nonspecific radiation of pain into both buttocks.
- Patients often experience stiffness and pain that awakes them in the early morning, a distinctive symptom not generally found in patients with mechanical back pain
- Physical therapy is important for maintaining function
- A proper exercise program is a crucial component of such therapy.

(31) (B) De Quervain tenosynovitis.

- De Quervain syndrome (de Quervain's tenosynovitis); a tenosynovitis of the sheath or tunnel that surrounds 2 tendons that control movement of the thumb;
- Symptoms are pain, tenderness and swelling over the thumb side of the wrist and difficulty gripping.
- Finkelstein's test is used to diagnose De Quervain's tenosynovitis in people who have wrist pain.

(32) (A) Ankylosing spondylitis.

- Symptoms of ankylosing spondylitis appear gradually, usually around 23-year-old.
Initial symptoms are typically chronic pain and stiffness in the middle part of the spine or the entire spine, often with pain in one or other buttock or the back of the hip from the sacroiliac joint.
- About 40% of ankylosing spondylitis patients have inflammation in the anterior chamber of the eye (uveitis) causing redness, eye pain, vision halos and photophobia
- This is thought to be due to the association that both ankylosing spondylitis and uveitis have with the inheritance of the HLA-B27 antigen.

(33) (C) Metaphysis.

- In long bone hematogenous osteomyelitis, the most common site of infection is in the metaphysis
- The major blood vessel to long bones usually penetrates the midshaft of the bone and then travels towards both ends forming metaphyseal vascular loops just before it hits the epiphyseal plates
- Stopped blood flow in these loops (together with the absence of basement membranes) predisposes this site to osteomyelitis.

(34) (A) Plantar fasciitis.

Plantar fasciitis is a painful inflammatory process of the plantar fascia, the connective tissue on the sole bottom surface) of the foot.

It is often caused by overuse of the plantar fascia or the tendon of the foot.

- The diagnosis of plantar fasciitis is usually made by clinical examination alone

(35) (B) Weight reduction.

- Non pharmacologic intervention, which is the cornerstone of osteoarthritis therapy, includes the following: patient education, heat and cold compressions, weight loss, exercise, physical therapy, occupational therapy, unloading in certain joints (e.g. the hip).

- Weight reduction relieves stress on the affected knees and hips

The benefits of weight loss whether obtained through regular exercise and diet or through surgical intervention, may extend not only to symptom relief but also to a slowing in cartilage loss in weight-bearing joints (e.g. knees).

- In addition, weight loss lowers levels of the inflammatory cytokines and adipokines that may play a role in cartilage degradation

(36) (A) Osteoarthritis.

- Osteoarthritis is a clinical syndrome of joint pain accompanied by varying degrees of functional limitation and reduced quality of life.
- Knee pain due to osteoarthritis is usually bilateral and felt in and around the knee.
- CRP, to detect inflammation and test for the activity of the disease, may be used to help differentiate osteoarthritis and rheumatoid arthritis. An increased level of CRP occurs in rheumatoid arthritis but not in osteoarthritis.

ESR, to detect inflammation in the body will be increased in rheumatoid arthritis but not osteoarthritis.

(37) (A) Patient presents with proximal muscle weakness.

Dermatomyositis is an idiopathic inflammatory myopathy, with characteristic cutaneous findings, at occurrence and attacks

clinical signs: disorder most frequently affects the skin and muscles but may also affect the joints, esophagus, the lungs and less commonly the heart. A complication of dermatomyositis that is observed, most often in children and adolescents, is involvement manifests as proximal muscle weakness. It is often easy to note muscle fatigue or weakness when climbing stairs, walking, rising from a sitting position, combing their hair, or reaching for items in cabinets that are above their shoulders. Skin lesions may occur but is not a regular feature of dermatomyositis.

(38) (D) Aspirin.

Most children with juvenile rheumatoid arthritis are treated with NSAIDs and intra-articular corticosteroid injections

NSAIDs are the first line of medication treatment to reduce inflammation and pain, the exception is modify in anti-rheumatic drug, is a powerful drug which helps suppress joint inflammation in the majority of juvenile rheumatoid arthritis patients with polyarthritis.

Corticosteroids are potent anti-inflammatory drugs used in patients with juvenile rheumatoid arthritis bridging until disease-modifying anti-rheumatic drug are effective.

(39) (B) Gouty arthritis.

Gout is a recurrent attack of acute monoarticular arthritis resulting from intra-articular deposition of monosodium urate crystals due to disorders of urate metabolism. Risk factors include male gender, obesity and postmenopausal status in females.

Patient presents with excruciating joint pain of sudden onset that can awaken the patient from sleep.

Most commonly gout affects the first metatarsophalangeal joint (podagra) and the midfoot, knees, ankles and wrists but the hips and shoulders are generally spared.

Joints are erythematous, swollen and exquisitely tender

Tophi (urate crystal deposits in soft tissue) may be seen with chronic disease

(40) (B) Osteoporosis.

In osteoporosis, bone mass is reduced and mineralization is normal.

It is commonly associated with elderly age and postmenopausal women. There is a pain referable to site and tenderness at fracture site.

- When a person has kyphosis, the upper spine is rounded and looks like a hump.
- Kyphosis associated with bone thinning (osteoporosis) in older people often is called a dowager's hump or hyperkyphosis.

(41) (C) Bisphosphonate.

T s is a ase of Pa e' seas of bone

- Bisphosphonates are the medications used to strengthen bones weakened by osteoporosis.
- They are the m nstay of treatment
- In severe cases, surgery may be necessary.

(42) (C) Walking and endurance muscle training.

Endurance : ain g can be an acceptable form o cere s for maintaining oi ncreasing bone density in iddle-aged or oidt : a ults provided there is suffici npact.

- Strength train'n if d<>ne witl a high enough ntensity fo a prolonged pe od of time, seems to be effective for improving bone density in middle-aged and older women who have low bone density.

(43) (C) Osteoporosis.

- If patients do not receive pr >mpt treatment for CusI ing syndrome, other complications may occur such as bone loss (osteoporosis), which can result in unusua bone fractures, ib fractures and fractures of the bones in the feet

(44) (C) Vertebral compression fracture.

- People with osteoporosis can suffer a fractu even when doing everyday things, such as reaching, twisting coughing and sneezing.
- Fractures caused by o teoporosis most often occur i th spine.
- These spinal fractures called vertebral compression frac tures.
- They are almost twic as common as other fractures typ ca I loked to osteoporosis, such as broken ops and wrists.

(45) (A) Osteoporosis.

- T score reading:
T-score between +1.0 and -1.0 is normal
- T-score between -1.0 and -2.5 is osteopenia.
- T-score less than -2.5 s osteoporosis.

(46) (A) Osteoporosis.

- Osteoporosis s defined as a progressive systemic sk let ! isorder characterized by low bone mineral densit deterioration the microarchitectu of bo; sue and sus< eptibility to fracture
- The x-ra , is normal, b it there is decrease in bone densi .
- There are early changes in bone density in the affected ip (white arrows).
- Several months later, x-rays may sho¹ a dramatic loss o bone density with a near complete disappearance of the femoral head
- This temporary loss o bone density is why the disease' termed transient osteoporosis of the hip.

(47) (A) Failure of mineralization.

- Osteomalacia is the soften ng of t.1 bones caused b defective bone mineralization secondary to inadequate amounts o available phosphorus and catciu or because of overactive resorption of calcium from the bone as a result of hypenarathyroidism

(48) (B) Vitamin D and calcium supplement.

Primary prevention! In achieving adequate peak bone mass

Secondary prevention depends on minimizing loss of bone mass and maintaining skeletal structure and cortical thickness

- Diet supplementation with calcium and vitamin D is a preventive measure aimed at preventing osteoporosis in the men and women of mature age

Osteoporosis can occur in both men and women and at any age, but it is most common in older women. Vitamin D is important to absorb calcium from the diet

However, with vitamin D, the body is unable to absorb calcium from the foods that are eaten and the body has to take calcium from the bones, making them weaker

(49) (A) Osteoporosis.

Major risk factor to osteoporosis

Osteoporosis is often asymptomatic condition and often fracture is the first symptom that

leads to investigation and diagnosis of the condition

It is not a symptom of osteoporosis in the absence of fractures

(50) (B) Aging process.

- Associated with osteoporosis (osteoporosis type II) occurs in women and men older than 50 years old and represents bone loss associated with aging. Secondary osteoporosis occurs when an underlying disease deficiency, or drug causes osteoporosis.

(51) (C) Smoking.

Advanced age, female gender are the most important factors for osteoporosis, but they are endogenous.

Smoking is an independent exogenous risk factor for osteoporosis as been proven. Smoking has a direct effect on the development of osteoporosis, people who have been smoking for a long time are more vulnerable to fractures and they will take longer time to recover from their fractures. It is more likely that complications will develop as a result of their fractures.

(52) (C) Both A and B.

Several treatments are available that help prevent further bone and joint damage and help to relieve pain.

To determine the most appropriate treatment, the doctor considers the following: age of patient, stage of cancer and ongoing cancer treatments, stage of avascular necrosis and location and amount of bone affected.

Physical therapy includes decreased weight bearing, range of motion exercises and strengthening exercises, as well as exercise to increase circulation. Surgical options include core decompression, osteotomy and arthroplasty

(53) (A) Allopurinol.

Allopurinol is a common treatment for gout used to block excess production of uric acid and help the body excrete acid that might cause problems.

It is a xanthine oxidase inhibitor, which means taken regularly, allopurinol can prevent recurrence of gout attacks.

It should not be started during an acute attack as it might prolong the attack or precipitate more attacks.

(54) (A) Uric acid deposit secondary to synovial fluid over saturation.

- Needle aspiration of fluid from a gouty joint will reveal negatively birefringent monosodium urate crystals.

(55) (B) X-ray.

- This is a case of osteoarthritis.
- Diagnosis is made with reasonable certainty based on history and clinical examination.
- X-rays may confirm the diagnosis.
- The typical changes seen on x-ray include joint space narrowing, subchondral sclerosis (increased bone formation around the joint), subchondral cyst formation and osteophytes.

(56) (B) Surgery.

- This is a case of case of Perth's disease (Legg-Calve-Perthes' disease), in which there is osteochondrosis of the upper end of the femur.
- Surgery is considered in some cases, particularly in older children or those more severely affected.
- The higher the age at onset the more severe the involvement as there is less remodelling potential, a higher extent of incongruity at the end of the natural history and worse prognosis.
- In younger children (under 5-year-old) and those with mild disease, Perthes' disease will usually heal well without any specific treatment.
- These children are treated by observation, often with physiotherapy or home exercises.

(57) (C) Flexion of PIP joint and hyperextension of DIP joint.

- Boutonniere deformity can manifest itself acutely following trauma, but most Boutonniere deformity are found weeks following the injury or as the result of progressive arthritis.
- The PIP joint of the finger is flexed and the DIP joint is hyperextended.

(58) (B) Femoral anteversion.

- In femoral anteversion, the femoral neck leans forward with respect to the rest of the femur.
- This causes the lower extremity on the affected side to rotate internally (e.g. the knee and foot twists towards the midline of the body).
- The normal child is born with 40 degrees of femoral anteversion.
- This gradually decreases to 10-15 degrees at adolescence and generally improves with further growth.
- No treatment is necessary if the anteversion is within this normal range.
- Surgery is only indicated if the anteverision is over 50 degrees and the child is at least 8-year-old.

(59) (C) Scoliosis.

- The forward bend test is a test used most often in schools and doctor's offices to screen for scoliosis.
- During the test, the child bends forward with the feet together and knees straight while dangling the arms

(60) (A) It is contraindicated in acute gouty arthritis.

- Aliopurinol is a drug used primarily to treat hyperuricemia (excess uric acid in blood plasma) and its complications, including chronic gout, uric acid calculi, calcium oxalate calculi, antineoplastic-induced hyperuricemia.
- It is a xanthine oxidase inhibitor.
- It is contraindicated in acute gout since it may cause an acute exacerbation.
- Even in the chronic situation aliopurinol may precipitate an acute episode; thus colchicine or an anti-inflammatory analgesic should be used as a prophylactic against this and continued for a month after the course has finished.

(61) (B) Bouchard's nodes.

- Bouchard's nodes are hard, bony outgrowths or gelatinous cyst on the proximal interphalangeal joint.
- They are a sign of either osteoarthritis or rheumatoid arthritis.
- It seen commonly in osteoarthritis, they are caused by formation of calcification bone spur of the articular (joint) cartilage.

(62) (A) Monosodium urate monohydrate crystals.

- Gout and pseudogout are the 2 most common crystal-induced arthropathies.
- Gout is caused by monosodium urate monohydrate crystals.
- Pseudogout is caused by calcium pyrophosphate crystals and is more accurately termed calcium pyrophosphate disease.

(63) (D) Calcium pyrophosphate crystals.

- Calcium pyrophosphate is a substance produced in the cartilages of the joints.
- It can become deposited as crystals on joint tissues.
- This is called calcium pyrophosphate deposition.
- Calcium pyrophosphate deposition can cause a number of problems of which the most well known is pseudogout.

(64) (A) Aliopurinol.

- Aliopurinol is a drug used primarily to treat hyperuricemia (excess uric acid in blood plasma) and its complications, including chronic gout.
- It is a xanthine oxidase inhibitor which is administered orally.

(65) (B) NSAIDs.

- Treatment for mild to moderate spinal stenosis is NSAIDs and abdominal muscle strengthening.
- For advanced spinal stenosis, epidural corticosteroid injections can provide relief.
- For refractory spinal stenosis, surgical laminectomy may achieve significant short-term success, but many patients will have a recurrence of symptoms.

(66) (B) NSAIDs.

- Several classes of antiinflammatory agents are effective for the treatment of acute gout, including NSAIDs, colchicine, systemic and intraarticular glucocorticoids and biologic agents that inhibit the action of interleukin-1 beta.
- The administration of potent oral NSAIDs, such as naproxen (500 mg twicedaily) or indomethacin (50 mg 3 times daily) reduces acute gouty inflammation in most patients with acute gout.

(67) (A) Uric acid level.

- The joint most commonly involved in gout is the first metatarsophalangeal joint (the big toe) and is called podagra.
- Serum uric acid concentrations may be supportive of a diagnosis of gout, but alone the presence of hyperuricemia or normal uric acid concentrations do not confirm or rule out the diagnosis of gout as frequently uric acid levels may be normal during an acute gout attack.

(68) (A) Prednisone.

- Polymyalgia rheumatica is a chronic, self-limited disorder.
- Therapy is based on empiric experiences because few randomized clinical trials are available to guide treatment decisions.
- The therapeutic goals are to control painful myalgia, to improve muscle stiffness and to resolve constitutional features of the disease.
- Corticosteroids (e.g. prednisone) are considered the treatment of choice because they often cause complete or near-complete symptom resolution and reduction of ESR to normal.
- However, no definite evidence demonstrates that corticosteroids (or any other therapy) alter the natural history of polymyalgia rheumatica.
- Before the corticosteroid era, patients with polymyalgia rheumatica occasionally experienced spontaneous improvements and musculoskeletal symptoms were treated with NSAIDs.
- The low-dose corticosteroids used in polymyalgia rheumatica are almost certainly ineffective in the prevention of vasculitis progression.

(69) (D) Duplex US of lower limb.

- We have to exclude DVT.
- Unilateral leg swelling is more often due to local causes, e.g. deep vein thrombosis but bilateral swelling from systemic causes may be much more obvious on one side than the other and therefore appears to be unilateral swelling.
- Imaging tests of the veins are used in the diagnosis of DVT, most commonly either proximal compression US or whole-leg US.
- CT scan venography, MRI venography, or MRI of the thrombus are also possibilities.

(70) (A) Heberden's nodes.

- Heberden's nodes are hard or bony swellings that can develop in the DIP joint.
- Heberden's nodes typically develop in middle-aged patients, beginning either with a chronic swelling of the affected joints or the sudden painful onset of redness, numbness and loss of manual dexterity.
- This initial inflammation and pain eventually subsides and the patient is left with a permanent bony outgrowth that often skews the fingertip sideways.

(71) (D) Corticosteroid.

- This is a case of De Quervain's tenosynovitis
- Wrist pain, Finkelstein's test positive, tenderness distal to radial styloid, so the diagnosis most likely De Quervain's tenosynovitis.
- Splinting of the thumb and wrist relieves symptoms, but most patients find the loss of the thumb for functional activities too restrictive and do not consistently wear the splints.
- Injection of corticosteroid into the sheath of the first dorsal compartment reduces tendon thickening and inflammation.
- If injection therapy fails, surgical release of the first dorsal compartment relieves the entrapment.

ENT



(1) A postpartum female has recurrent attacks of vertigo, tinnitus, hearing loss, nausea and vomiting. She is diagnosed with conductive hearing loss. CT scan shows adhesion in semicircular canal. What is the diagnosis?

- (A) Otosclerosis.**
- (B) Meniere's disease.**
- (C) Tuberous sclerosis.**
- (D) Noise induced hearing loss.**

(2) What is the most common cause of conductive hearing loss in children?

- (A) Meniere's disease.**
- (B) Acute otitis media.**
- (C) Perforated tympanic membrane.**
- (D) Tuberous sclerosis.**

(3) What is the most common cause of tinnitus?

- (A) Vertigo.**
- (B) Sensory neural deafness.**
- (C) Acute otitis media.**
- (D) Noise.**

(4) An elderly male presented with progressive hearing loss, it is most profound when he is listening to the radio and he has not had any symptoms like that before. On examination, Weber and Rinne tests show bilateral sensorineural deafness. What is the diagnosis?

- (A) Meniere's disease.**
- (B) Otosclerosis.**
- (C) Noise-induced hearing loss.**
- (D) Hereditary hearing loss.**

(5) A 25-year-old patient presented with decreased hearing. He has a family history of hearing loss. On examination his ears are normal; Weber and Rinne tests revealed that the bone conduction is greater than air conduction. What is the next step?

- (A) Tell him it is only temporary and it will go back to normal.**
- (B) Tell him there is no treatment for his condition.**
- (C) Refer him to audiometry.**
- (D) None of the above.**

(6) An adult presented with vertigo, sensorineural hearing loss and tinnitus for the last 3 years. Now he has presented with parasthesia and numbness in left side of face. By investigations, a CT scan shows a mass in cerebellopontine. What is the diagnosis?

- (A) Aquistic neuroma.**
- (B) Meniere's disease.**
- (C) Meningioma.**
- (D) Barotraumas.**

(7) A patient presented to the ER with nausea, vomiting, nystagmus, tinnitus and inability to walk unless he concentrates on a target object. On examination, cerebellar function is intact. What is the diagnosis?

- (A) Benign positional vertigo.
- (B) Meniere's disease.
- (C) Vestibular neuritis.**
- (D) Vestibular schwannoma.

(8) A 32-year-old female patient presented to the hospital with sudden deafness. In her family history, her mother became deaf at 30-year-old. What is the diagnosis?

- (A) Otosclerosis.
- (B) Acoustic neuroma.
- (C) Perforation of tympanic membrane.
- (D) None of the above.

(9) A middle-aged patient presented to the hospital with ataxia, multiple skin pigmentations and decreased hearing; he gave history of the same condition with one of his family member. What is the diagnosis?

- (A) Malignant melanoma.
- (B) Neurofibromatosis.
- (C) Hemochromatosis.
- (D) Measles.

(10) A patient presented with recurrent otitis media with bulging tympanic membrane. He used multiple antibiotic courses with no improvement. What is the treatment now?

- (A) Amoxicillin.
- (B) Amoxicillin-clavulanate acid.
- (C) Tazocin.
- (D) IV analgesics.

(11) What is the most common cause of otorrhea?

- (A) Acute otitis media.
- (B) Cholesteatoma.
- (C) Eustachian tube dysfunction.
- (D) Leakage of cerumen.

(12) A 4-year-old patient presented with pain and swelling behind his left ear. He had symptoms of ear inflammation one week ago, but he did not take the medication. Examination found signs of inflammation inside the ear with loss of light reflex. What is the diagnosis?

- (A) Left otitis media.
- (B) Left mastoiditis.
- (C) Left otitis externa.
- (D) Left glue ear.

(13) What is the first line of treatment of otitis media?

- (A) Amoxicillin.**
- (B) Amoxicillin-clavulanate acid.**
- (C) Tazocin.**
- (D) Azithromycin.**

(14) What is the main symptom of acute otitis media?

- (A) Pain.**
- (B) Itching.**
- (C) Hearing loss.**
- (D) Blood discharge.**

(15) A child complains of right ear pain and tenderness on pulling ear with no fever. Examination shows inflamed edematous right ear canal with yellow discharge. What is the diagnosis?

- (A) Otitis media.**
- (B) Otitis externa.**
- (C) Cholesteatoma.**
- (D) Auricular abscess.**

(16) What is the most common complication of acute otitis media?

- (A) Labyrinthitis.**
- (B) Meningitis.**
- (C) Encephalitis.**
- (D) Mastoiditis.**

(17) A 5-year-old child with recurrent upper respiratory tract infection presented with earache. On examination, the congested ear has fluid in middle ear and adenoid hypertrophy. For management, what should be done beside an adenoidectomy?

- (A) Myringotomy.**
- (B) Grommet tube insertion.**
- (C) Mastoidectomy.**
- (D) Tonsillectomy.**

(18) A patient presented with ear pain for 2 days. Examination found red and bulging tympanic membrane, apparent vessels, limited mobility of the tympanic membrane, and undemarcation of the edge erythema behind ear drum, negative Rinne test and positive Weber test. What is the diagnosis?

- (A) Acute otitis media.**
- (B) Tympanic cellulitis.**
- (C) Mastoiditis.**
- (D) Bullous myringitis.**

(19) What is the treatment of otitis externa?

- (A) Antibiotic drops.**
- (B) Oral Antibiotic.**
- (C) Ventral bulla osteotomy.**
- (D) Curettage of the tympanic cavity.**

- (20) A patient presented to the ER with ear pain, fever and decreased hearing for 2 days. On examination, there is red tympanic membrane with hemorrhagic vesicle. What is the diagnosis?
- (A) Erysipelas.
 - (B) Cellulitis.
 - (C) Bullous myringitis.
 - (D) Perichondritis.
- (21) A patient presented to the hospital with ear pain and congested nose. On examination, there is red tympanic membrane, fluid in the middle ear and positive insulation reflex. Optometry showed peaked wave. What is the management?
- (A) Antibiotic.
 - (B) Myringotomy.
 - (C) Steroids.
 - (D) Observation.
- (22) A patient presented to the hospital with decrease in hearing. He gave history of upper respiratory tract infection recently. On examination by otoscopy, there is air fluid levels with normal tympanic membrane landmarks. What is the diagnosis?
- (A) Acute otitis media.
 - (B) Serous otitis media.
 - (C) Labyrinthitis.
 - (D) Necrotising otitis externa.
- (23) A child patient presented with right ear pain and discharge that started after swimming in a pool. On examination, the patient has external auditory canal redness, tenderness and discharge. What is the management?
- (A) Antibiotics drop only.
 - (B) Systemic antibiotics.
 - (C) Steroid drops only.
 - (D) Antibiotics and steroid drops.
- (24) A patient presented to the hospital with foul, whitish ear discharge. On examination, the tympanic membrane is perforated. What is the diagnosis?
- (A) Otosclerosis.
 - (B) Otitis externa.
 - (C) Cholesteatoma.
 - (D) Meniere's disease.
- (25) A patient presented to the hospital with ear pain. On examination, there is rupture of tympanic membrane and cloudy secretion. What is the treatment?
- (A) Antibiotic drop.
 - (B) Systemic antibiotic.
 - (C) Corticosteroid.
 - (D) Analgesic agent.

(26) A patient presented to the hospital with purulent discharge from middle ear. What is the treatment?

(A) Systemic antibiotic.

(B) Local antibiotic.

(C) Steroid.

(D) Analgesics.

(27) A child presented with upper respiratory tract infection and ear pain. On examination, there is hyperemia of tympanic membrane with positive insufflations test; he tried 2 drugs without benefit.

What is the best treatment?

(A) Augmentin.

(B) Azithromycin.

(C) Ciprofloxacin.

(D) Steroid.

(28) A male patient presented with otitis media, sinusitis, laryngitis, bronchitis and septic arthritis.

Which of the following organism is the suspected the cause?

(A) Moraxella catarrhalis.

(B) Neisseria gonorrhoeae.

(C) Neisseria meningitidis.

(D) Streptococcus pneumoniae.

(29) What is the treatment of cholestatoma?

(A) Antibiotics.

(B) Steroids.

(C) Surgery.

(D) Grommet tube.

(30) A child presented with an earache. On examination, there was a piece of glass deep in the ear canal. The mother gave a history of a broken glass in the kitchen, but she thought she cleaned that completely. What is the best treatment?

(A) Remove by irrigation of a stream of solution into the ear.

(B) Remove by forceps.

(C) Remove by suction catheter.

(D) Instill acetone into the external auditory canal.

(31) All of the following cause ear pain except:

(A) Acute otitis media.

(B) Dental caries.

(C) Vestibular neuritis.

(D) Temporomandibular joint arthritis.

(32) A young patient presented with sudden developing ear pain and facial drooping.

What is the management?

(A) None, most will resolve spontaneously.

(B) Surgery.

(33) A patient presented with vertigo; he gives history of upper respiratory tract infection.

What is the diagnosis?

- (A) Cholesteatoma.**
- (B) Benign paroxysmal positional vertigo.**
- (C) Vestibular neuritis.**
- (D) Shwanoma.**

(34) An elderly patient presented with ear pain, headache and hemiparesis. Which of the following is the most likely diagnosis?

- (A) Epidural abscess.**
- (B) Spinal abscess.**
- (C) Subdural hematoma.**
- (D) Psoas abscess.**

(35) What is the questionnaire used to differentiate between sleep apnea and snoring?

- (A) Michigan.**
- (B) Epworth.**
- (C) Connor.**
- (D) Texas Nexus.**

(36) What is the most common site of tumor in sinuses?

- (A) Maxillary sinus.**
- (B) Frontal sinus.**
- (C) Ethmoid sinus.**
- (D) Sphenoidal sinus.**

(37) What is the most common cause of unilateral offensive blood tinged purulent rhinorrhea in a 3-year-old child?

- (A) Rhinoscleroma.**
- (B) Lupus.**
- (C) Foreign body.**
- (D) Adenoid hypertrophy.**

(38) What is the management of mild epistaxis in child?

- (A) Compression on nose and leaning forward.**
- (B) Compression on nose and leaning backward.**
- (C) Place nasal tampon.**
- (D) Put the patient on one side.**

(39) A patient presented with nose trauma with pain. By investigations, x-ray show sun-displaced nasal fracture. What is the management?

- (A) Surgery.**
- (B) Analgesic.**
- (C) Anterior nasal packing.**
- (E) Antibiotic.**

(40) What is the best diagnostic test for maxillary sinusitis?

- (A) CT.**
- (B) X-ray.**
- (C) Torch examination.**
- (D) MRI.**

(41) A young patient presented with seasonal sneezing, rhinorrhea and conjunctivitis. What is the first line of management?

- (A) Antihistamine.**
- (B) Decongestant.**
- (C) Local steroid.**
- (D) Desensitization.**

(42) A patient presented with perennial allergic rhinitis. What is the first line of treatment?

- (A) Steroid.**
- (B) Antihistamine.**
- (C) Decongestant.**
- (D) Desensitization.**

(43) A patient presented with difficulty breathing in one nostril. On examination, found an erythematous structure. What is the best treatment?

- (A) Decongestant.**
- (B) Antihistamine.**
- (C) Sympathomimetic.**
- (D) Corticosteroid.**

(44) What is the most common cause of epistaxis in children?

- (A) Self-induced trauma.**
- (B) Nasal polyps.**
- (C) Sinusitis.**
- (D) Tumors.**

(45) In case of stroke with loss of smell, which lobe is affected?

- (A) Frontal lobe.**
- (B) Parietal lobe.**
- (C) Occipital lobe.**
- (D) Temporal lobe.**

(46) A 56-year-old patient diagnosed with vasomotor rhinitis. What is the first line of treatment?

- (A) Local antihistamine.**
- (B) Local decongestant.**
- (C) Local steroid.**
- (D) Systemic antibiotic.**

(47) Which of the following is an indication for tonsillectomy?

- (A) Obstructive sleep apnea.
- (B) Asymptomatic large tonsils.
- (C) Peripharyngeal abscess.
- (D) Retropharyngeal abscess.

(48) A patient is complaining of right side pharynx tenderness. On examination, the patient had inflamed right tonsil and redness around tonsil with normal left tonsil. What is the diagnosis?

- (A) Parenchymal tonsillitis
- (B) Quinsy (peritonsillar abscess)
- (C) Parapharyngeal abscess
- (D) Acute membranous tonsillitis

(49) A patient presented with bad breath smell. On examination, there are yellow pockets around the tonsils with no dental caries. What is the diagnosis?

- (A) Cryptic tonsillitis.
- (B) Sjogren's syndrome.
- (C) Parotid tumor.
- (D) None of the above.

(50) What is the most common cause of recurrent tonsillitis?

- (A) Rhino virus.
- (B) Parainfluenza virus.
- (C) Group B Streptococcus.
- (D) Bacteroid.

(51) A patient presented to the clinic complaining of snoring in sleeping. On examination, the tonsils are enlarged. What is the management?

- (A) Weight reduction.
- (B) Adenoidectomy.
- (C) Tonsillectomy.
- (D) Reassurance and monitoring.

(52) A patient presented with history of hoarseness of voice for 3 weeks. What is the next step?

- (A) Throat swab.
- (B) Laryngoscopy.
- (C) Tongue depressor.
- (D) Fiber optic nasoscope.

(53) A patient presented with a history of waking up from sleep. He cannot talk and has no fever, but he can cough. On examination, he has normal vocal cords. What is the diagnosis?

- (A) Functional aphonia (psychogenic aphonia).
- (B) Organic aphonia.
- (C) Dyphonia.
- (D) Autism.

(54) What is the best treatment of sleep apnea?

- (A) Continuous positive airway pressure.**
- (B) Oxygen.**
- (C) Surgery.**
- (D) None of the above.**

(55) A 55-year-old male patient presented with mild hoarseness. On examination, there was a mid-cervical mass. What is the best investigation?

- (A) Indirect laryngoscopy.**
- (B) CT brain.**
- (C) CT neck.**
- (D) Chest x-ray.**

ANSWERS

ENT



(1) (A) Otosclerosis.

- Otosclerosis usually affects middle-aged women.
- It is most commonly progressive conductive hearing loss.
- The tympanic membrane is normal.
- Symptoms increase with pregnancy.

(2) (B) Acute otitis media.

- In the children the most common cause is acute otitis media, in adult is chronic otitis media.

(3) (D) Noise.

- One of the most common causes of tinnitus is damage to the microscopic endings of the hearing nerve in the inner ear, noise-induced tinnitus.
- Advancing age is generally accompanied by a certain amount of hearing nerve impairment and consequently chronic tinnitus.
- Today, loud noise exposure is a very common cause of tinnitus and it often damages hearing as well.
- Unfortunately, many people are unconcerned about the harmful effects of excessively loud noise, firearms and high intensity music.

(4) (C) Noise-induced hearing loss.

- In noise induced hearing loss, there is exposure to excessive sounds (acoustic trauma), which produces a temporary shift in the stimulus threshold of the outer hair cells within the inner ear, thus allowing them to recover.
- Sufficiently intense and repeated exposure results in a permanent threshold shift.
- Occupational hearing loss is the principal culprit, but any noise including military, social and firework noises, can all be implicated.
- High frequency sound is the first to be affected, followed by progressively lower frequencies.
- Usually the patients present with gradual hearing loss (unless exposure was to a sudden noise such as an explosion), which is associated with tinnitus in 60% of cases.
- The problem is bilateral and typically symmetrical.
- Upon examination, the tympanic membrane is normal.

(5) (C) Refer him to audiometry.

- Often this process reveals a family history of otosclerosis.
- After compiling this information, audiometric evaluation helps to narrow the differential diagnoses.
- Symptom onset usually occurs by the early third decade of life, but onset is not unusual later in life.
- Symptoms include slowly progressive hearing loss, which is bilateral in 70% of cases.
- Vertigo is uncommon.
- Tinnitus may be present and often resolves after successful surgical management.

(6) (A) Acoustic neuroma.

- Acoustic neuroma is a benign tumor of cranial nerve VIII.
- They mostly occur between 30-60-year-old.
- They are mostly unilateral. 80% of this tumor occurs in the cerebellopontine, presented with sensorineural hearing loss, tinnitus, disequilibrium, facial numbness, hypoesthesia and absence of

(7) (B) Meniere's disease.

The other classic symptoms for P/len'ere s c sease ar vertigo, tinn tus a fee i ig of fullness or pressure the ear a d fl jet ati ; hear ng

- Common s to s of Meniere disease a tack do t eflect the e re picture of the disorder, because symptoms vary before, during be: ween and after acks and a so during the late-stage.
- Oncoming attacks are o te 1 p seeded by ar aura or h specific set of warning mptoms.
- These symptoms indud balanc disturbance, dizziness lightheadedness ea ac e increased ear . essure, hearing loss or tinnitus increase, sound ser sit v t and wague feeling uneasiness.

uring an eary-stage attack, symptoms include spon ne us violent vertigo i actuating hearing loss and ear fullness (aural fuinessj and/or tinnitus.

addition to the above main symptoms, attacks can also nclude anxiety , fear arrhea, blurry vision oi eye jerking, nausea and vomiting, cod sweat, pa pita ion or rapid pulse and trembling.

(8) (A) Otosclerosis.

- Otosclerosis is the most common form of non-syndron c : rogresswe conductive hearing loss in adults
- It s caused by a growth of the spongy bone tissue n the rr ddle ear which prevents the ossicles (malleus incus stapes from being able to move as we! as they once did.
- in certain advanced cases of otosclerosis there may also be amage to the auditory nerve (sensorineural hearing loss

Otosclerosis may be observed n teenagers but it is generc y first observed in people between 20-50-year-old

- The cause of otosclerosis s not fully nderstood, aitho g) research has shown tha otosclerosis tends to run in families and may be hereditary or passed down t orn parent to child
- People who have > family history of otosclerosis are more kely to develop the disorder.

(9) (B) Neurofibromatosis.

- eurofibromatosis type 2 or called shwanoma is autsoi a; dominant and is characterized by bilateral acoustic neuromas masses aroun i the 8th cranial nerve in t ie brain), w ich causes hearing loss, facial weakness, headache, or unsteadiness.
- Caf-au-iait spots are seen.
- Neurofibromatosis Is the result of a mutation of the protei i merlin (also known as neurofibromin 2 or schwannemin) in chromosome 22q12 or a mutation in a tumor suppressor gen> eurofibromatosis type 2 (whose gene product is schwannomin or merlin)
- It accounts for only 10% of all cases of neurofibromatosis and its frequency is lower than neurofibomatosis type 1

(10) (B) Amoxicillin-davulanate acid.

- The first ine antibiotic treatment is amox'ciliin.
- 1 there is antibioti. res stance or use of amoxicillin n t st 30 days then augmentin or another penicillin der ative plus beta lactamase Inhibitor s recommended
- Whi le less than 7 days of antibiotics have less side effe ts more than 7 c ays appear to be more effective
- Among short course ant b'otics or g acting azithromy ' i was fo nd more likely tc be successful than short acting alternatives
- If the re is no Improvement after 2-3 days of treatment a change n therapy may be cons dered
- Ii chronic cases with effusions insertion of myringotomy tube (a so cal ed a grommet) into the eardrum reduces recurrence rates in the 6 months after placement but have little effect on lona term hearing.

(11) (A) Acute otitis media.

- The most common causes of otorrhea are middle ear infections leading to a ruptured eardrum and external ear infections.
- Other, less common and much more serious causes include drainage of CSF from brain trauma and cancer of the ear canal.

(12) (B) Left mastoiditis.

- Mastoiditis is the result of an infection that extends to the air cells of the skull behind the ear. Specifically, it is an inflammation of the mucosal lining of the mastoid antrum and mastoid air cell system inside the mastoid process, that portion of the temporal bone of the skull that is behind the ear and which contains open, air-containing spaces.
- It is usually caused by untreated acute otitis media (middle ear infection) and used to be a leading cause of child mortality.
- With the development of antibiotics, however, mastoiditis has become quite rare in developed countries where surgical treatment is now much less frequent and more conservative, unlike former times.

Untreated, the infection is spread to surrounding structures including the brain, causing serious complications

(13) (A) Amoxicillin.

In otitis media the first-line antibiotic treatment is amoxicillin.

- If there is antibiotic resistance or use of amoxicillin in the last 30 days then augmentin or another penicillin derivative plus beta-lactamase inhibitor is recommended.

(14) (A) Pain.

An integral symptom of acute otitis media is ear pain; other possible symptoms include fever and irritability (in infants).

Once an acute otitis media is usually precipitated by an upper respiratory tract infection, there often are accompanying symptoms like cough and nasal discharge.

(15) (B) Otitis externa.

Otitis externa is infection involving external ear canal.

Its signs include pain on manipulation or pulling the ear (auricle) swelling, inflamed ear canal and otorrhea (discharge in auricle) but the tympanic membrane is intact.

(16) (D) Mastoiditis.

Mastoiditis presented with complication of acute otitis media.

(17) (A) Myringotomy.

- A myringotomy is a surgical procedure in which a tiny incision is created in the eardrum to relieve pressure caused by excessive buildup of fluid or to drain pus from the middle ear.

Myringotomy may be indicated in cases of acute otitis media recurrent acute otitis media with effusion and chronic otitis media with effusion.

Patients with acute otitis media that is refractory to medical therapy or associated with signs of toxicity require myringotomy with or without middle ear culture.

- The most common indication for children with chronic otitis media is effusion lasting more than 3 months.

(18) (A) Acute otitis media.

- These are typical symptoms of acute otitis media
- The most prominent symptom of acute otitis media is an onset of pain because of the drum bulging.

(19) (A) Antibiotic drops.

- External otitis is often a self-limiting condition.
- However, if the infection is moderate to severe, or if the climate is humid enough that the skin of the ear remains moist, spontaneous improvement may not occur.
- Topical solutions or suspensions in the form of ear drops are the mainstays of treatment for external otitis.
- Removal of debris (wax, shed skin and pus) from the ear canal promotes direct contact of the prescribed medication with the infected skin and shortens recovery time.
- Effective medications include ear drops containing antibiotics to fight infection and corticosteroids to reduce itching and inflammation.
- In painful cases a topical solution of antibiotics such as aminoglycoside, polymyxin or fluoroquinolone is usually prescribed.
- Antifungal solutions are used in the case of fungal infections.
- External otitis is almost always predominantly bacterial or predominantly fungal, so that only one type of medication is necessary and indicated.

(20) (C) Bullous myringitis.

- Bullous myringitis is an inflammation of the ear drum (tympanic membrane) caused by a bacterial or viral infection.
- This disorder is a particular type of middle ear infection that causes painful pimples (vesicles) on the ear drum.
- The most common causes of bullous myringitis are the bacteria *Mycoplasma pneumoniae*, *Streptococcus pneumoniae* and *Staphylococcus aureus*, though several other bacteria and viruses can potentially cause ear infections.
- It occurs when middle ear inflammation leads to the development of a small pus-filled blister on the tympanic membrane.
- As a blister grows, an individual is likely to experience constant, sharp pain that disrupts hearing. The sore may ooze yellow or white pus that drains from the ear.

(21) (A) Antibiotic.

- This is a case of acute otitis media.
- Acute otitis media usually develops from a (viral) upper respiratory infection with blockage of the Eustachian tube and effusion in the middle ear when the fluid in the middle ear gets additionally infected with bacteria.
- The most common bacteria found in this case are *Streptococcus pneumoniae*, *Haemophilus influenzae* and *Moraxella catarrhalis*.
- Antibiotics remain the initial therapy of choice for acute otitis media.

(22) (B) Serous otitis media.

- Otitis media with effusion, also called serous or secretory otitis media or glue ear is usually the result of blockage of the Eustachian tube from an upper respiratory infection or an attack of nasal allergies.
- In the presence of bacteria, this fluid may become infected, leading to an acute suppurative otitis

(23) (D) Antibiotics and steroid drops.

This is a case of otitis externa.

Topical therapy is highly effective for external otitis, delivering a high concentration of medication to the infected and inflamed tissue with minimal side effects.

- Several topical agents are available for treating external otitis, including antibiotics, antiseptics, glucocorticoids, and combinations.

They are administered as single agents and combination formulas.

- Studies comparing antimicrobial/glucocorticoid versus antimicrobial alone found comparable clinical

Differences in outcomes for regimens with and without glucocorticoids

- The addition of a hydrocortisone to either acetic acid or ciprofloxacin, however, did decrease time of symptom resolution by 0.1 day,

(24) (C) Cholesteatoma.

A cholesteatoma sometimes called a keratoma is an abnormal accumulation of squamous epithelium within the middle ear and mastoid.

- The migration of squamous epithelium of external ear through a tympanic membrane perforation into the middle ear forms a cholesteatoma.

It is an extremely rare condition to observe extensive cholesteatoma on the medial surface of the tympanic

membrane with perforation.

This condition is termed tympanic membrane cholesteatoma

(25) (B) Systemic antibiotic.

- Medical therapy for perforations is directed at controlling otorrhea.

Local replications of administration of ototoxic ear drops preceding sensorineural hearing loss are rare

- For this reason, avoid ear drops containing gentamicin, neomycin sulfate, or tobramycin in the presence of tympanic membrane perforation.

Systemic antibiotics are occasionally used when controlling otorrhea from a tympanic membrane perforation.

Options include (but are not limited to) amethoxazole, amoxicillin) directed at typical respiratory flora suffice

in most cases

(26) (B) Local antibiotic.

Chronic suppurative otitis media is a perforated tympanic membrane with persistent drainage from the middle ear (lasting 6 weeks)

- Chronic suppurative otitis media can occur with or without cholesteatoma and the clinical history of both conditions can be very similar.

Classic symptoms of chronic suppurative otitis media (mucosal disease) include otorrhea and ear itching which can affect one or both ears.

The discharge is large and is characterized from serous or mucoid to frankly purulent and the discharge may be intermittent or continuous

Topical antibiotics are more effective than systemic antibiotics in resolving otorrhea and eradicating middle ear bacteria.

When treatment of acute otitis media with a first-line antimicrobial drug has proven inadequate, a number of second-line alternatives are available.

- Drugs chosen for second-line treatment should be effective against beta-lactamas producing strains of *Haemophilus influenzae* and *Moraxella catarrhalis* against susceptible and most non-susceptible strains of *Streptococcus pneumoniae*

Only four antimicrobial agents meet these requirements : amoxicillin-clavulanic acid, cefdinir, cefuroxime axetil and IM ceftriaxone.

(28) (A) *Moraxella catarrhalis*.

- *Moraxella catarrhalis* is a fastidious nonmotile Gram-negative aerotolerant diplococcus that can cause infections of the respiratory system, middle ear, eye, central nervous system and joints of humans.

- These bacteria are known to cause otitis media, bronchitis, sinusitis and laryngitis

It has also been known to cause infective exacerbations in adults with chronic lung disease and it is an important cause in acute sinusitis, maxillary sinusitis, bacteremia, meningitis, conjunctivitis, acute purulent inflammation of chronic bronchitis, urethritis, septicemia (although this is rare), septic arthritis (which is also a rare occurrence) as well as acute arthritis in adults and acute otitis media in children.

(29) (C) Surgery.

Cholesteatoma is destructive and expanding growth consisting of keratinizing squamous epithelium in the middle ear and/or mastoid process

- Surgery is performed to remove the sac of squamous debris and a mastoidectomy is performed

(30) (A) Remove by irrigation of a warm solution into the ear.

- Techniques appropriate for the removal of ear foreign bodies include mechanical extraction, irrigation and suction
- Irrigation is contraindicated for organic matter that may swell and enlarge within the auditory canal (e.g. seeds)
- Insects, organic matter and objects with the potential to come friable and break into smaller evasive pieces are often better extracted with suction than with forceps
- Live insects in the ear canal should be immobilized (killed rapidly by instilling alcohol, 2% cocaine (xylocaine) or mineral oil into the ear canal) before removal is attempted.

(31) (C) Vestibular neuritis.

- The main symptom of vestibular neuronitis is vertigo, which appears suddenly often with nausea and vomiting.
- Causes of ear pain include dental problems, otitis media, otitis externa, infection of the throat or nose, disorders of the nerves of the regions around the ears, injury to a facial nerve, temporomandibular joint disorder, tonsillitis and problems in the Eustachian tube.

(32) (D) Antiviral, steroid and narcotics for severe pain.

This is a case of Herpes zoster oticus Ramsay Hunt syndrome type II

Herpes zoster oticus is essentially a herpes zoster infection that affects cranial nerves VII (facial nerve) and VIII (vestibulocochlear nerve).

Patients present with facial paralysis, ear pain, vesicles and sensorineural hearing loss and vertigo

Management includes antivirals and steroids

Overall the earlier treatment is started, the better the outcome

If medication is begun within 3 days of symptoms appearing, 70% of patients make a full recovery.

(33) (C) Vestibular neuritis.

Viral infection of the vestibular nerve and/or labyrinth is believed to be the most common cause of vestibular neuronitis especially in children.

vestibular neuritis may be preceded by symptoms of upper respiratory tract infection.

(34) (A) Epidural abscess.

Risk factors for intracranial epidural abscess (within the skull) include chronic ear infections, chronic sinusitis, head injury, mastoiditis and recent neurosurgery.

Clinical presentations include fever, headache, lethargy, nausea and vomiting pain at the site of recent surgery that gets worse (especially if fever is present) and neurological symptoms depending on the location of the abscess.

(35) (B) Epworth.

The Epworth sleepiness scale is a simple questionnaire measuring the general level of daytime sleepiness, aimed here the average sleep propensity.

This is a measure of the probability of falling asleep in a variety of situations.

(36) (A) Maxillary sinus.

- Malignant tumor of the sinuses accounts 3% of head and neck cancer.**
 - The most malignant is squamous cell carcinoma and most commonly arise from maxillary sinus.**
- The secondary form is ethmoid sinus.**
- > frontal and sphenoid are rare**

(37) (C) Foreign body.

Foreign body in nose is commonly seen in children.

Its symptoms include unilateral offensive mucopurulent or sanguinous nasal discharge, epistaxis, nasal obstruction, snoring, nasal pain and sneezing.

(38) (A) Compression on nose and leaning forward.

Direct pressure is applied by pinching the soft, fleshy part of the nose

This applies pressure to Little's area (Kiesselbach's area) the source of the majority of nose bleeds and promotes clotting

Compression of nose to stop bleeding and leaning forward to prevent aspiration

(39) (B) Analgesic.

Un-displaced fracture, technically nothing needs to be done allowing time for the bones to heal will ultimately restore the strength of the nasal bones.

(40) (A) CT.

- CT scanning is the best method for viewing the paranasal sinuses.

(41) (A) Antihistamine.

It is a case of allergic rhinitis.

-Allergic rhinitis is seasonal or perennial itching, sneezing, rhinorrhea, nasal congestion and sometimes

conjunctivitis caused by exposure to pollens or other allergens.

- Diagnosis is by history and skin testing.
- Treatment is a combination of antihistamines, decongestants, nasal corticosteroids and, for severe, refractory cases, desensitization
- The most effective first line drug treatments are oral antihistamines

(42) (B) Antihistamine.

Allergic rhinitis may occur seasonally (hay fever) or throughout the year (perennial rhinitis).

At least 25% of perennial rhinitis is non allergic

- Patients have itching (in the nose, eyes or mouth), sneezing, rhinorrhea and nasal and sinus obstruction.
- Sinus obstruction may cause frontal headaches; sinusitis is a frequent complication.
- Coughing and wheezing may also occur, especially if bronchial asthma is also present.
- The most prominent feature of perennial rhinitis is chronic nasal obstruction, which, in children, can lead to chronic otitis media.
- Treat by removal or avoidance of allergens for perennial rhinitis, antihistamines, decongestants, nasal corticosteroids, or a combination.
- Treatment of seasonal and perennial allergic rhinitis is generally the same, although attempts at environmental control (e.g. eliminating dust, mites and cockroaches) are recommended for perennial rhinitis.

(43) (D) Corticosteroid.

- This is a case of nasal polyp.
- Steroid nose drops are the usual first line treatment for nasal polyps.
- Nasal drops that contain steroid medicines reduce inflammation in the nose. nasal or sinus
- Gradually, nasal stuffiness reduces and the polyps shrink over 4-6 weeks.

ulceration

(44) (A) Self-induced trauma.

- Local trauma is the most common cause, followed by facial trauma, foreign bodies, infections and prolonged inhalation of dry air.
- Self-induced trauma from repeated nasal picking can cause anterior septal mucosal bleeding.
- This scenario is frequently observed in young children

(45) (D) Temporal lobe.

(46) (A) Local antihistamine.

- Features of vasomotor rhinitis are excessive vascular engorgement of the nasal mucosa and profuse, watery rhinorrhoea.

The cause is unknown, but it appears to be related to an imbalance in the regulation of the parasympathetic and sympathetic systems, with the parasympathetic predominating.

Topical antihistamines (e.g. azelastine) are the usual first-line medical treatment.

(47) (A) Obstructive sleep apnea.

- Obstructive sleep apnea is most important indication for tonsillectomy
- Abscesses can be treated by antibiotic and drainage.

(48) (B) Quinsy (peritonsillar abscess)

The types of acute tonsillitis are usually bilateral.

Quinsy is a unilateral swelling of soft palate that pushes the tonsil downward medially and uvula edematous that pushes to opposite side.

- Parapharyngeal abscess is a swelling in the lateral wall of the pharynx with neck swelling

(49) (A) Cryptic tonsillitis.

- Cryptic tonsillitis is pockets in the tonsils that accumulate food and other debris, cause bad breath and caseation

Cryptic tonsillitis is also called tonsil stones, tonsilloliths, fetid tonsils and chronic caseous tonsillitis.

(50) (D) Bacteroid.

- Streptococcus pneumoniae, Staphylococcus aureus and Haemophilus influenzae are the most common bacteria isolated in recurrent tonsillitis and Bacteroides fragilis is the most common anaerobic bacterium isolated in recurrent tonsillitis.
- The microbiologies of recurrent tonsillitis in children and adults are different; adults show more bacterial isolates, with a higher recovery rate of Prevotella species, Porphyromonas species and B fragilis organisms, whereas children show more group A α -hemolytic streptococci.
- Also, adults more often have bacteria that produce beta-lactamase.

(51) (C) Tonsillectomy.

- The degree of enlargement of tonsils is assessed with a scale that attempts to objectively judge the size of the tonsils and the risk for sleep-disordered breathing
- This Brodsky scale grades the size of the palatine tonsils from 1+ to 4+.
- At the largest classification, the tonsils are touching in the midline of the throat.
- If the size of tonsils determined to be enlarged, they may be removed with a surgery called a tonsillectomy.

(52) (B) Laryngoscopy.

- Voice changes are related to disorders in the sound producing parts (vocal folds) of the voice box (larynx).
- To evaluate the hoarseness, examine vocal cord by laryngoscopy.

(53) (A) Functional aphonia (psychogenic aphonia).

- In this case laryngeal examination will show usually bowed vocal folds that fail to adduct to the midline during phonation.
- However the vocal folds will adduct when the patient is asked to cough.
- Treatment should involve consultation and counseling with a speech pathologist.

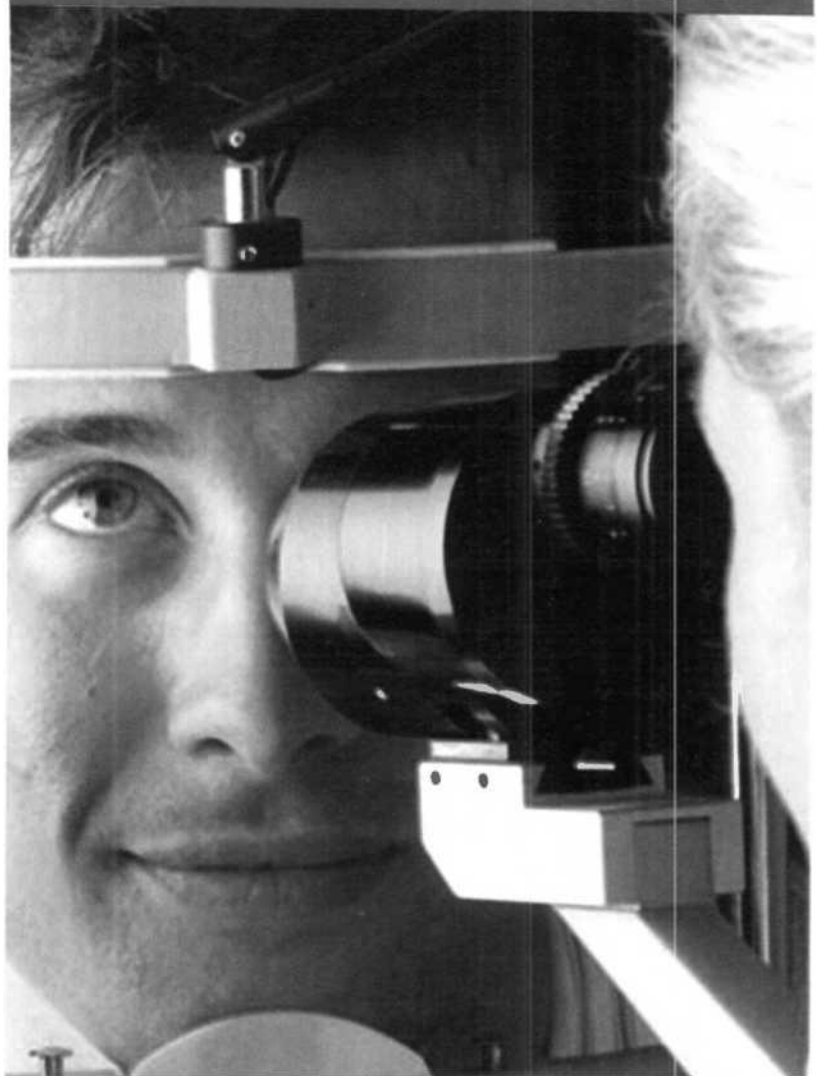
(54) (A) Continuous positive airway pressure.

- Continuous positive airway pressure provides a pneumatic stent for the upper airway, eliminating the airway collapse during inspiration. It is administered by a soft mask that covers the nose only.
- Sufficient pressure is introduced to eliminate apneas, hypopneas and snoring.

(55) (C) CT neck.

- This may be a case of laryngeal cancer.
- Indirect laryngoscopy (with a mirror) or flexible nasolaryngoscopy is part of the clinical examination. Depending on the findings of the laryngoscopy, imaging is aimed to characterizing and staging laryngeal or pharyngeal tumors or identifying a cause for vocal cord paralysis.
- CT or MRI can be used for either indication but MRI is preferable if pathology is expected in the brain stem, skull base, or suprahyoid neck whereas CT is better for imaging pathology in the infrahyoid neck and mediastinum.
- Imaging investigations are not indicated in patients with a history of hoarseness shorter than 3 weeks unless it is associated with other signs and symptoms of serious underlying pathology such as unexplained shortness of breath, stridor, dysphagia, hemoptysis, a neck lump or lower cervical

OPHTHALMOLOGY



(1) A patient presented with complaining of foreign-body sensation in eye, pain, light sensitivity, redness and blurred vision. On examination after staining with fluorescein dye, there is dendritic ulcer. What is the diagnosis?

- (A) Herpes simplex keratitis.
- (B) Chlamydia trachomatis.
- (C) Allergic conjunctivitis.
- (D) Corneal abrasion.

(2) A boy suffers from upper respiratory tract infection and after 3 days he presented with conjunctivitis with occipital and neck lymph node enlargement. What is the diagnosis?

- (A) Adenoviruses.
- (B) Streptococcus.
- (C) Herpes simplex virus.
- (D) Chlamydia.

(3) A newborn presented with conjunctivitis and otitis media. What is the treatment?

- (A) Systemic antibiotic.
- (B) Oral steroid.
- (C) Topical antibiotic.
- (D) Topical steroid.

(4) A patient presented with constricted pupil, ciliary flushing and cloudy anterior chamber, but there is no abnormality in eyelid, vision and lacrimal duct. What is the diagnosis?

- (A) Uveitis.
- (B) Central vein thrombosis.
- (C) Central artery embolism.
- (D) Acute angle closure glaucoma.

(5) A patient presented with acute eye pain, red eye, photophobia and blurred vision. On examination, keratic precipitates are on the posterior surface of the cornea and cells in the anterior chamber (in the aqueous humor). What is the best treatment?

- (A) Steroids and cyclopentolate.
- (B) Topical antibiotic.
- (C) Topical acyclovir.
- (D) Antibiotic and NSAIDs.

(6) A patient presented with typical history of viral conjunctivitis in right eye. What is the management?

- (A) Topical steroid.
- (B) Topical antiviral.
- (C) Topical antibacterial.

- (7) A patient presented with eye itching due to a foreign body in his eye. What is the next step after removal the foreign body?
- (A) Topical antibiotic.
 - (B) Oral antibiotic.
 - (C) Topical steroid.
 - (D) Oral steroid.
- (8) A patient presented with red eye, itching and discharge. What is the diagnosis?
- (A) Conjunctivitis.
 - (B) Iritis.
 - (C) Keratitis.
 - (D) Acute angle glaucoma.
- (9) A patient presented with left red eye, watery discharge and photophobia. On examination, peri-auricular lymph nodes are non-tender. What is the diagnosis?
- (A) Bacterial conjunctivitis.
 - (B) Viral conjunctivitis.
 - (C) Allergic conjunctivitis.
 - (D) Seasonal conjunctivitis.
- (10) A man has a known case of allergic conjunctivitis and suffers every spring; he is a farmer and cannot avoid allergic substances. What is the advice to reduce the symptoms in the night?
- (A) Sleep in an air conditioned room.
 - (B) Steroid eye drops.
 - (C) Eye irrigation with vinegar solution.
 - (D) Antihistamines.
- (11) A patient presented with small swelling under his eye. On examination he has inflammation in lacrimal duct. What is the management?
- (A) Topical steroid.
 - (B) Topical antibiotic.
 - (C) Systemic steroid.
 - (D) Systemic antibiotic.
- (12) An elderly man presented with red eye on the left side. Between the two eyes above the nose, there is small, papule lesions, for which he is using acyclovir cream. He has a prodrome of fever, malaise, nausea, vomiting and severe pain. What is the treatment?
- (A) Topical antibiotic.
 - (B) Topical antihistamine.
 - (C) Topical steroids.
 - (D) Topical decongestant.

(13) A patient presented with dry eyes and moisturizing eye drops were prescribed to him 4 times daily. What is the most appropriate method of application of these eye drops?

- (A) 1 drop in the lower fornix.
- (B) 2 drops in the lower fornix.
- (C) 1 drop in the upper fornix.
- (D) 2 drops in the upper fornix.

(14) What is the treatment of conjunctivitis in a newborn?

- (A) Systemic antibiotic.
- (B) Oral steroid.
- (C) Topical antibiotic.
- (D) Topical steroid.

(15) A man bought a cat and then he developed watery discharge from his eyes. What is the diagnosis?

- (A) Allergic conjunctivitis.
- (B) Atopic dermatitis.
- (C) Cat scratch disease.
- (B) Acute keratitis.

(16) Many patients presented to the clinic with manifestations of red follicular conjunctivitis. What is the management?

- (A) Improve water supply and sanitation.
- (B) Improve sanitation and destroy the vector.
- (C) Eradicate the reservoir and destroy the vector.
- (D) Destroy the vector.

(17) A patient has worn contact lenses for vision correction for 10 years. He presented complaining of excessive tearing when exposed to bright light. What is the management?

- (A) Wear a hat.
- (B) Wear sunglasses.
- (C) Remove the lenses at night.
- (D) Use saline eye drops 4 times/day.

(18) A female patient presented with right eye pain, redness and watery discharge, with no history of trauma or itching. On examination, there is diffuse congestion in the conjunctiva and watery discharge. What is the management?

- (A) Topical antibiotic.
- (B) Topical antihistamine.
- (C) Topical steroid.
- (D) Reassurance and supportive treatment.

(19) A patient presented with bilateral eye redness, discharge and tearing. On examination, cornea and lens are normal. What is the diagnosis?

- (A) Conjunctival follicle.
- (B) Keratitis.
- (C) Scleritis.
- (D) Glaucoma.

(20) A young female patient presented with red eyes, irritation, itching, profuse mucous discharge and photophobia, but there is no change in vision or pain. What is the diagnosis?

- (A) Viral conjunctivitis.**
- (B) Allergic conjunctivitis.**
- (C) Acute hemorrhagic conjunctivitis.**
- (D) Chlamydial conjunctivitis.**

(21) A 70-year-old man presented with fever and headache, followed by sensations of burning pain, itching, oversensitivity and vesicular rash over the forehead. What is the treatment?

- (A) IV antibiotic.**
- (B) Oral antibiotic.**
- (C) IV corticosteroid.**
- (D) Acyclovir.**

(22) A patient presented with influenza-like symptoms characterized by fatigue, malaise, nausea and mild fever accompanied by progressive pain and skin hyperesthesia in forehead. After 3 days, a maculopapular rash appeared that involved the eye and forehead in association with periorbital edema, pain and hyperesthesia of the left eyelid skin. What is the treatment?

- (A) Acyclovir for 3-5 days.**
- (B) Acyclovir for 7-10 days and follow up.**
- (C) Give corticosteroid only.**
- (D) Give analgesic.**

(23) A 65-year-old male patient presented with significant decrease of vision, which was associated with mild pain and redness. On examination, fluorescein dye is used and a characteristic dendritic ulcer appeared. What is the diagnosis?

- (A) Herpes keratitis.**
- (B) Bacterial keratitis.**
- (C) Fungal keratitis.**
- (D) Onchocercal keratitis.**

(24) What is the differential between uveitis and keratitis in red eye?

- (A) Redness of the eye.**
- (B) Blurred vision.**
- (C) Photophobia.**
- (D) Eye pain.**

(25) A patient was treated for glaucoma. He presents now with shortness of breath, cough and lung infiltration. What drug is most reasonable for these symptoms?

- (A) Timolol.**
- (B) Pilocarpine.**
- (C) Acetazolamide.**
- (D) Betaxolol.**

(26) What is the drug contraindicated in acute glaucoma management?

- (A) Pilocarpine.**
- (B) Timolol.**
- (C) Dorzolamide.**
- (D) Dipivefrin.**

(27) A patient known case of chronic obstructive pulmonary disease and diabetes mellitus presented with open angle glaucoma. What is the best treatment?

- (A) Timolol.**
- (B) Betaxolol.**
- (C) Acetazolamide.**
- (D) Dipivefrin.**

(28) What is the mechanism of open angle glaucoma formation?

- (A) Degeneration and obstruction of the trabecular mesh work.**
- (B) Abrupt closure of the angle between the cornea and iris.**
- (C) Central artery embolism.**
- (D) Inflammation of optic nerve.**

(29) What is the mechanism of acute closed angle glaucoma formation?

- (A) Degeneration and obstruction of the trabecular mesh work.**
- (B) Abrupt closure of the angle between the cornea and iris.**
- (C) Central artery embolism.**
- (D) Inflammation of optic nerve.**

(30) A patient presented with acute, painful vision loss. What is the diagnosis?

- (A) Central vein thrombosis.**
- (B) Central artery embolism.**
- (C) Acute closed angle glaucoma.**
- (D) Acute conjunctivitis.**

(31) A 50-year-old man presented to the ER with sudden headache, blurred of vision and eye pain.

What is the diagnosis?

- (A) Acute closed angle glaucoma.**
- (B) Acute conjunctivitis.**
- (C) Corneal ulcer.**
- (D) Central vein thrombosis.**

(32) What is the management of acute congestive glaucoma?

- (A) IV acetazolamide and topical pilocarpine.**
- (B) Antihistamine.**
- (C) Dipivefrin.**
- (D) Antibiotics.**

(33) A 60-year-old patient presented with decreased vision bilaterally specially to bright light. On examination, cupping with wedge shaped opacities is noticed. What is the diagnosis?

- (A) Lens subluxation.**
- (B) Cataract.**
- (C) Open angle glaucoma.**
- (D) Congenital glaucoma.**

(34) What is the initial treatment of open globe injury?

- (A) Continuous antibiotic drops.**
- (B) Continuous water and normal saline drops.**
- (C) Continuous steroids drop.**
- (D) Sterile cover and preparation for surgery.**

(35) A patient with a known case of diabetes mellitus for a long time presented after a car accident complaining of flashes of light in the left eye and blurred vision. What is the diagnosis?

- (A) Retinal detachment.**
- (B) Cataract**
- (C) Retinitis.**
- (D) Macular degeneration.**

(36) A 39-year-old diabetic patient presented with blurred vision, eye redness and irritable eye. He was diagnosed with diabetes mellitus while he was 30-year-old. On examination, fundoscopy shows vessels growing (angiogenesis). What is the diagnosis?

- (A) Background retinopathy.**
- (B) Proliferative retinopathy.**
- (C) Macular degeneration.**
- (D) Retinal detachment.**

(37) A 24-year-old male presented with painless loss of vision. On examination; there is deterioration of the macula and optic atrophy. What is the diagnosis?

- (A) Physiological myopia.**
- (B) Pathological myopia.**
- (C) Acquired myopia.**
- (D) Macular degeneration.**

(38) All of the following are true in retinal detachment except:

- (A) It can lead to sudden loss of vision.**
- (B) It occurs more in far sighted than near sighted eyes.**
- (C) It occur following cataract surgery.**
- (D) If you suspect retinal detachment, your patient needs urgent intervention.**

(39) An 80-year-old in his normal state of health presented with decreased visual acuity bilaterally without any defect in his visual field. On examination, visual acuity was right eye = 20/100, left eye = 20/160. Fundoscopic examination showed early signs of cataract and drusen formation, with irregular .. pigmentations. No macular edema or neovascularization were observed. What is the appropriate action beside antioxidants and zinc?

- (A) Refer the patient for emergency laser therapy.**
- (B) Refer the patient for cataract surgery.**
- (C) Follow up with the patient next month to detect improvement.**
- (D) Do nothing more.**

(40) An elderly diabetic patient presented with sudden unilateral visual loss. On examination, there are multiple pigmentations in the retina with macular edema. What is the diagnosis?

- (A) Retinal detachment.**
- (B) Central retinal artery occlusion.**
- (C) Central retinal vein occlusion.**
- (D) Diabetic retinopathy.**

(41) A male patient presented with sudden progressive decreasing vision in the left eye over last 3 days with pain in the same eye. On examination, fundoscopy showed optic disk swelling. What is the diagnosis?

- (A) Central retinal artery occlusion.**
- (B) Central retinal vein occlusion.**
- (C) Optic neuritis.**
- (D) Macular degeneration.**

(42) A male patient with a known case of sickle cell anemia presented with sudden unilateral visual loss.

On examination, the macula is cherry red and the afferent papillary light reflex is absent. What is the diagnosis?

- (A) Central retinal artery occlusion.**
- (B) Central retinal vein occlusion.**
- (C) Retinal detachment.**
- (D) Vitreous hemorrhage.**

(43) A patient with a known case of hypertension presented with painless decreased vision that <:> slowly progressing. On examination, cupping of optic disc has increased. What is the diagnosis?

- (A) Open angle glaucoma.**
- (B) Closed angle glaucoma.**
- (C) Cataract.**
- (D) Hypertensive changes.**

(44) All of the following is true about central retinal artery occlusion except:

- (A) Painful loss of vision.**

- (45) A patient with a known case of diabetes mellitus type 2 has good vision. What is the most thing to avoid to prevent eye disease (retinal back ground) to develop?
- (A) Hypertension and smoking.
 - (B) Obesity and smoking.
 - (C) Hypertension and obesity.
 - (D) Smoking.
- (46) A patient suffered from blow out fracture. What is the presentation?
- (A) Parasthesia in superior orbital ridge.
 - (B) Exoptlamos.
 - (C) Diplopia and upward gaze.
 - (D) Air fluid level in maxillary sinus.
- (47) A patient presented with progressive vision loss. On examination, there is lens opacifications. What is the diagnosis?
- (A) Cataract.
 - (B) Glaucoma.
 - (C) Uveitis.
 - (D) Astigmatism.
- (48) What is the investigation used to differentiate between corneal ulcer and abrasion?
- (A) Field measurement.
 - (B) Slit limp with fluorescein stain.
 - (C) Ophthalmoscopy.
 - (D) Visual acuity.
- (49) All of the following statements are correct incase of entropion except:
- (A) Lid margin turns in towards globe.
 - (B) Lid margin turns out towards globe.
 - (C) Manifested by tearing and dry eye.
 - (D) May cause abrasions with secondary corneal scarring.
- (50) A patient presented with eye trauma from a tennis ball. On examination, there is blood in anterior chamber. Which of the following should be rule out
- (A) Conjunctivitis.
 - (B) Keratitis.
 - (C) Penetrating foreign body.
 - (D) Belphritis.
- (51) By using Snellen chart, how much is the vision loss if the patient can read up to line 3?
- (A) 20/70.
 - (B) 20/50.
 - (C) 20/40.



(52) An elderly man presented with decrease in vision. On examination by Snellen chart, he is able to read up to third line. What is his visual acuity?

- (A) 20/40.**
- (B) 20/50.**
- (C) 20/60.**
- (D) 20/100.**

(53) Which of the following is true regarding pterygium?

- (A) It is a part of systemic disease.**
- (B) It causes blindness.**
- (C) It is due to vitamin A deficiency.**
- (D) It needs surgical intervention.**

(54) A 27-year-old female patient has diabetes mellitus type 2 and she already wears glasses. How often is follow up for her eyes?

- (A) 6 months.**
- (B) 12 months.**
- (C) 2 years.**
- (D) 5 years.**

(55) A patient developed raccoon eye after RTA. What is the cause?

- (A) Fracture of the globe.**
- (B) Fracture in base of anterior fossa.**
- (C) Concussion.**
- (D) Base skull fracture.**

(56) What is the most dangerous red eye that needs ophthalmologist intervention?

- (A) Red eye associated with itching.**
- (B) Red eye with presence of mucopurulent discharge.**
- (C) Bilateral red eyes.**
- (D) Red eye associated with photophobia.**

(57) A patient has a known case of allergic conjunctivitis and he has taken steroid eye drops for a long time. What is the side effect to be concern about it?

- (A) Cataract.**
- (B) Glaucoma.**
- (C) Keratoconus.**
- (D) None of the above.**

(58) An elderly patient with a known case of hypertension and diabetes mellitus with history of multiple cardiac attack and cerebrovascular accident came for routine eye checkup. On examination, there is bilateral opacifications in both lenses with decreasing of visual acuity. What is the management?

- (A) Laser therapy.**
- (B) Cataract surgery.**
- (C) Eyeglasses.**
- (D) Observation and follow up.**

(59) A 70-year-old female complains of suffering from a headache after playing with a puzzle for a short period and she cannot continue playing. What is the finding in examination?

- (A) Astigmatism.**
- (B) Glaucoma.**
- (C) Nystagmus.**
- (D) Blood pressure.**

(60) A child presented to the ophthalmology clinic with abnormal eye gazing. On examination, covertest showed the left eye moved spontaneously to the left. What is the most likely complication?

- (A) Strabismus.**
- (B) Gluacoma.**
- (C) Myobloma.**
- (D) Amblyopia.**

(61) A female patient presented with eye pain, watery discharge and light sensitivity (photophobia). These symptoms occur frequently. Examination showed corneal ulceration. Which of the following is triggering for the recurrence of her symptoms?

- (A) Dust.**
- (B) Hypertension and hyperglycemia.**
- (C) Dark and driving at night**
- (D) Ultraviolet light and stress.**

(62) What is the best way to measure the distance vision?

- (A) Snellen chart.**
- (B) Ophthalmoscope.**
- (C) Ishihara's chart test**
- (D) Perimeter.**

(63) A male patient developed corneal ulcer in his right eye after trauma. What is the management:

- (A) Cotton debridement and systemic antibiotic.**
- (B) Cotton debridement and cydoplegic.**
- (C) Topical antibiotic, cydoplegic eye drops.**
- (D) Topical steroid.**

(64) A 35-year-old patient presented with painful eye movement and decreased visual acuity. What is the diagnosis?

- (A) Optic neuritis.**
- (B) Retinintis pigmentosa.**
- (C) Central retinal artery occlusion.**

(65) A patient with history of upper respiratory tract infection complains of a flash of light when he sneezes. What is the cause?

- (A) Chemical irritation of retina.**
- (B) Mechanical irritation of retina.**
- (C) Fever.**
- (D) None of the above.**

(66) A 54-year-old patient works as a farmer. He presented complaining of dry eye. He has smoked 2 packs/day for 20 years. What is the management besides artificial tearing?

- (A) Advise him to exercise.**
- (B) Stop smoking.**
- (C) Wear glasses.**
- (D) All of the above.**

(67) An elderly patient presented with sudden loss of vision in the right eye that was associated with headache. Investigations show high CRP and ESR. What is the diagnosis?

- (A) Temporal arteritis.**
- (B) Polymyalgia rheumatica.**
- (C) Retinal vein occlusion.**
- (D) None of the above.**

(68) A patient presented with diplopia. On examination, he has lateral and vertical diplopia and cannot abduct both eyes. What is the affected nerve?

- (A) Cranial nerve II.**
- (B) Cranial nerve III.**
- (C) Cranial nerve VI.**
- (D) Cranial nerve V.**

(69) A patient has a known case of TB and is on anti-TB drugs. He suffers from the inability to recognize green. Which of the following drugs is the responsible?

- (A) Pyrazinamide.**
- (B) Ethambutol.**
- (C) Rifampicin.**
- (D) Streptomycin.**

(70) An infant was born with hemangioma on the right eyelid. What is appropriate time to operate to prevent amblyopia?

- (A) 1 day.**
- (B) 1 week.**
- (C) 3 months.**
- (D) 9 months.**

ANSWERS

OPHTHALMOLOGY



(1) (A) Herpes simplex keratitis.

Dendritic ulcers are the most common presentation of herpes simplex virus keratitis

Prominent features of a dendritic ulcer include a linear branching pattern with terminal bulbs

epithelial border and central ulceration through the basement membrane

(2) (A) Adenoviruses.

Adenoviruses are associated with: cold symptoms the preauricular node is often palpable and tender Adenoviruses cause conjunctivitis.

(3) (A) Systemic antibiotic.

- Approximately one fourth of patients with conjunctivitis have concurrent otitis media, even in adults
- Thus, all children with conjunctivitis need to be checked for otitis media
- Cultures of the conjunctiva and middle ear fluid of children with conjunctivitis and otitis media have been found to grow predominately nontypeable Haemophilus influenzae and, less commonly Streptococcus pneumoniae and other bacteria.
- Because of the high frequency of resistance in Haemophilus influenzae, therapy with antibiotics resistant

- Systemic antibiotics are needed to treat otitis media; thus topical antibiotic therapy is not appropriate.

(4) (A) Uveitis.

Uveitis is defined as inflammation of one or more layers of the eyeball: anterior (iritis) intermediate vitreous and/or posterior chorioretinitis

Symptoms of uveitis differ depending upon the site of involvement within the eye Acute anterior uveitis presents with the following red eye (perilimbal injection known as ciliary flush) deep eye pain: photophobia especially consensual photophobia decreased visual acuity of the affected eye; constricted pupil and leukocytes in the anterior chamber

(5) (A) Steroids and cyclopentolate.

This case acute anterior uveitis

Treatment for acute anterior uveitis is eye drops.

These usually include a topical corticosteroid drop such as prednisolone acetate and often a dilating

drop such as cyclopentolate.

The corticosteroid drop treats the underlying inflammation

The dilating reduces pain and helps to prevent the complication of the pupil sticking to the adjacent lens.

The frequency of the drops depends primarily on the intensity of the inflammation.

Some forms of acute anterior uveitis are associated with an infection such as herpes and will also require therapy directed at the known infectious cause.

(6) (A) Topical steroid.

- Treatment of adenoviral conjunctivitis is supportive.

- Topical steroids may be used for pseudomembranes or when subepithelial infiltrates impair vision, although subepithelial infiltrates may recur after discontinuing the steroids
- Extreme caution should be taken when using corticosteroids, as they may worsen an underlying Herpes simplex virus infection.

(7) (A) Topical antibiotic.

- Topical ophthalmic antibiotic is used to prevent superinfection.
- Ophthalmic antibiotic ointments (e.g. bacitracin, ciprofloxacin) have an advantage by functioning as a lubricant and ophthalmic solutions (e.g. sulfacetamide ofloxacin) are easier to apply and therefore, enhance patient compliance.
- Corticosteroid ophthalmic solutions or ointments should be avoided because they increase the likelihood of superinfection and slow healing.

(8) (A) Conjunctivitis.

- Conjunctivitis refers to any inflammatory condition of the membrane that lines the eyelids and covers the exposed surface of the sclera.
- Conjunctivitis causes irritation, itching, foreign body sensation and watering or discharge of the eye.
- Most cases in adults are probably due to viral infection, but children are more likely to develop bacterial conjunctivitis than viral forms.

(9) (B) Viral conjunctivitis.

- Viral conjunctivitis is typically caused by a virus that can also cause the common cold
- A person may have symptoms of conjunctivitis alone, or as part of a general cold syndrome, with swollen lymph nodes (glands), fever, a sore throat and runny nose.
- The most common symptoms of viral conjunctivitis include redness, watery or mucus discharge and a burning, sandy, or gritty feeling in one eye.
- Some people have morning crusting followed by watery discharge, perhaps with some scant mucus discharge throughout the day.
- The second eye usually becomes infected within 24-48 hours.
- Pain and photophobia are not typical features of a primary conjunctival inflammatory process.

(10) (A) Sleep in an air conditioned room.

- Patients can remove pollens from their environment by using air-conditioning filters designed to trap irritating allergens, which are available for both the home and automobile installation.
- Cleaning floors with a damp mop, instead of sweeping, keeps allergens that are brought into the home on feet and clothing from becoming airborne which can exacerbate symptoms
- The current treatment options for seasonal allergic conjunctivitis include nonpharmacologic management by avoiding the offending allergen and using cold compresses to reduce the associated heat and swelling initially.
- If adequate relief of symptoms is not achieved, pharmacologic options used include ocular surface lubricating agents such as saline solution or artificial tears to help remove the allergens from the ocular surface and minimize exposure.

(11) (D) Systemic antibiotic.

- This is a case of dacryocystitis, an inflammation of the nasolacrimal sac, frequently caused by asolacrim

In case of purulent infection of the lacrimal sac and skin, one should use oral antibiotics like Augmentin, along with topical antibiotic drops, ointments, warm compresses and analgesic for pain as needed.

- If it is associated with orbital cellulitis, hospitalization is necessary.
- A broad spectrum antibiotic that can be used for penicillin-resistant Staphylococcus like cloxacillin can be initiated IV in case of orbital cellulitis.

Surgical exploration and drainage should be performed for focal collections of pus.

(12) (A) Topical antibiotic.

- Herpes zoster ophthalmicus represents reactivation of latent varicella zoster virus infection of the trigeminal ganglion.
- It is characterized by a prodrome of fever, malaise, nausea, vomiting and severe pain and skin lesions along the ophthalmic division of the trigeminal nerve.
- Conjunctival involvement includes hyperemia, follicular or papillary conjunctivitis and a serous or mucopurulent discharge.
- Treatment of varicella zoster virus eye disease includes oral acyclovir 600-800 mg 5 times/day for 7-10 days, to terminate viral replication.
- Topical broad-spectrum antibiotics are indicated for secondary bacterial infection (usually Staphylococcus aureus).
- Topical corticosteroids usually are not indicated for conjunctivitis or keratitis.

(13) (A) 1 drop in the lower fornix.

- The dry eyes are a chronic condition that may wax and wane, especially in older persons.
- Reviewing with patients the strategies for maximizing comfort is important, including instructions in the proper instillation of eye drops (e.g. a single drop into the lower fornix without contacting the eye with the dropper; instillation of no more than one drop at a time because any more exceeds the physical capacity of the inferior fornix and is therefore wasteful).

(14) (A) Systemic antibiotic.

Specific treatment is available for the various causes of neonatal conjunctivitis.

- Preliminary presumptive treatment pending culture confirmation should be based on the clinical picture.
- The treatment prior to laboratory results should include topical erythromycin ointment and IV or IM third generation cephalosporin, because of the rapid progression of gonococcal conjunctivitis.
- Patients with acute neonatal conjunctivitis should be treated for gonococcal conjunctivitis until culture results are available and then the treatment is altered according to the laboratory results.
- Systemic treatment is important in cases of chlamydial conjunctivitis since topical therapy is ineffective in eradicating the bacteria in the nasopharynx of the infant, which could cause a life threatening pneumonia if left untreated.

(15) (A) Allergic conjunctivitis.

- Acute allergic conjunctivitis is a sudden onset reaction that occurs when a person comes in

(16) (B) Improve sanitation and destroy the vector.

This is case of chlamydia trachomatis.

The main strategy to deal with Trachoma currently is known as SAFE

- The (S) and (A) in SAFE program correspond to how the disease should be treated, which is either through performing surgeries (S) on those with trichiasis or administering oral antibiotics (A) to those

individuals or at-risk people in communities

- The (F) and (E) then represent how Trachoma needs to be prevented by making changes to the environment and in modifying people's behavior

- The (F) in this case has to do with teaching people, especially children, about basic hygiene that involves practicing facial cleanliness and hand washing.

The (E) then specifies certain types of environmental changes that need to be made to improve sanitation such as creating latrines to help manage waste and an effective aid in vector (fly) control.

(17) (D) Use saline eye drops 4 times/day.

- Treatment of possible case of contact lens-related dryness includes contact lens rewetting drops

- This is usually a temporary solution but does offer some relief.

- The basic formulation of such products is based on a saline (sodium chloride (NaCl) solution) that may or may not have added KCl or other salts (referred to as mixed salts).

- For those with sensitive eyes, it is best to use a preservative-free eye drops

(18) (D) Reassurance and supportive treatment.

- This case is viral conjunctivitis since there is nothing to indicate allergy or bacterial infection.

• The clinical presentation of viral conjunctivitis is usually mild with spontaneous remission after 1-2 weeks

- Treatment is supportive and may include cold compresses, ocular decongestants and artificial tears.

- Topical antibiotics are rarely necessary because secondary bacterial infections are uncommon.

(19) (A) Conjunctival follicle.

- Acute follicular conjunctivitis is usually associated with viral (epidemic keratoconjunctivitis, Herpes zoster keratoconjunctivitis, infectious mononucleosis, Epstein-Barr virus infection) or chlamydial infections (inclusion conjunctivitis), while chronic disease may be caused by chronic chlamydial infection (trachoma, lymphogranuloma venereum) or as a toxic or reactive inflammatory response to topical medications and molluscum contagiosum infection.

- Symptoms are hyperemia, chemosis, watery discharge, photophobia and periorbital pain.

Signs include the follicles appearing as gray-white, round to oval elevations which measure between 0.5-1.5 mm in diameter

- Smaller follicles may produce a slightly irregular and velvety appearance.

- Follicles can be seen in the inferior and superior tarsal conjunctiva and less often on bulbar or

(20) (D) Chlamydial conjunctivitis.

- Chlamydial conjunctivitis (*Chlamydia trachomatis*) is associated with a body infection that is classified as a sexually transmitted disease.
- Whilst spread of the *Chlamydia* occurs from hand to eye from genital infection, Chlamydial conjunctivitis itself can be transmitted by shared towels and face cloths used on eyes via eye secretions and discharges.
- Chlamydial eye infections are diagnosed by culturing the organism and sending the sample to laboratory.

Chlamydia eye infections are treated with antibiotics.

- Antibiotics used to treat trachoma include tetracycline eye ointment and oral azithromycin, sold as Zithromax.

Scarred eyelids in trachoma may require surgery.

Corneal transplant can help restore vision if severe corneal damage occurs

- Conjunctivitis treatment includes antibiotic ointments as well as systemic antibiotics to treat the genital infection, which is usually also present

(21) (D) Acyclovir.

- Herpes zoster (or simply zoster), commonly known as shingles and also known as zona, is a viral disease characterized by a painful skin rash with blisters in a limited area on one side of the body (left or right), often in a stripe.
- It is painless in children, but older people are more likely to get zoster as they age and the disease tends to be more severe

Acyclovir is seen as the standard treatment

- Orally administered corticosteroids are frequently used in treatment of the infection.
- IV acyclovir is recommended in immunocompromised patients

(22) (B) Acyclovir for 7-10 days and follow up.

This is a case of Herpes zoster ophthalmicus

- Herpes zoster ophthalmicus is recurrent infection of varicella (chickenpox) in the ophthalmic division of the trigeminal dermatome most frequently affecting the nasociliary branch.
- Patients with Herpes zoster ophthalmicus are treated with oral acyclovir (800 mg 5 times daily) for 7-10 days, which reduces viral shedding and the chance of systemic dissemination of the virus as well as the incidence and severity of ocular complications, particularly if used within 12 hours of onset of symptoms.
- Palliative therapy includes Brown's solution, cool compresses, mechanical cleansing of the involved skin and topical antibiotic ointment without steroid to treat skin lesions.
- Oral acyclovir has been shown to be effective for the punctate, pseudodendritic and delayed corneal mucous plaque forms of herpes zoster epithelial Keratitis
- Topical steroids are useful in the management of sclerokeratitis, keratouveitis, interstitial keratitis, anterior stromal infiltrates and disciform keratitis
- Steroids should not be used in cases of exposure or neurotrophic keratitis because of the

- The ulcer is stained by fluorescein 2% due to shedding of the infected epithelial cells and its edges : fected epithelium) stained by rose Bengal.

Cornea' hyposthesia as diagnosed by weak blink response on touch - g the cornea by a sterile piece of cotton

- Patients with herpes simplex virus keratitis may report the following: pain, photophobia, blurred vision, tearing and redness

(24) (B) Blurred vision.

Symptoms of keratitis usually include light sensitivity, pain, redness and tearing. Symptoms of uveitis include redness of the eye, blurred vision, photophobia or sensitivity to light, eye pain, floaters which are dark spots that float in the visual field and headaches

(25) (A) Timolol.

- Timolol eye drops are used for the treatment of glaucoma caused vision loss through damage to the optic nerve.
- Timolol may cause stinging, irritation, blurred vision, eye redness and allergic reaction.
- Elderly people are especially prone to side effects, including breathing problems (predominant in / in patients with pre-existing bronchospastic disease) respiratory failure, dyspnea, nasal congestion, cough and upper respiratory infections.
- Treatment can slow heart rate for those with heart disease and may cause mental and physical lethargy.

Ten may experience a decrease in libido.

(26) (D) Dipivefrin.

- Sympathomimetics especially those with alpha-agonistic activity cause mydriasis and can precipitate acute closed angle glaucoma in predisposed individuals

Topical phenylephrine and its prodrugs dipivefrin and apraclonidine have been documented to induce acute closed angle glaucoma

- Treatment of acute closed angle glaucoma is aimed at quickly reducing intraocular pressure and opening the outflow track for the aqueous humor.

First-line topical agents decrease aqueous humor production and include beta-blockers (timolol, betaxolol or levobunolol), alpha-antagonists (brimonidine or apraclonidine) and prostaglandin analogues (latanoprost).

- Pilocarpine, a topical miotic, is used only when intraocular pressure is below 40-50 mmHg, as it will often be ineffective when the intraocular pressure is above this level.
- Pilocarpine is also ineffective when the attack is many hours old because of ischemia of the iris
- Additional adjunct agents include topical (acetazolamide) and systemic carbonic anhydrase inhibitors (acetazolamide and osmotic diuretics (mannitol, glycerol or isosorbide)

(27) (B) Betaxolol.

- Betaxolol is the best because it is selective beta-blocker and does not affect chronic obstructive pulmonary disease.
- Timolol is a nonselective beta-blocker and can cause eye problems for patients with pre-existing bronchospastic disease.

Acetazolamide causes increased urination in diabetic mellitus patients

Also acetazolamide increases the risk of developing calcium oxalate and calcium phosphate kidney stones

(28) (A) Degeneration and obstruction of the trabecular mesh work.

* The underlying mechanism for open-angle glaucoma involves degeneration of the trabecular meshwork filter, usually by unknown causes, that leads to aqueous backup and chronically elevated eye pressure.

- With prolonged high pressure, the ganglion nerves in the retina (the same nerves that form the optic nerve) atrophy.
- The exact mechanism for this nerve damage is poorly understood and proposed mechanisms include stretching, vascular compromise and alteration of glutamate transmitter pathways.
- As the ganglion nerves are progressively destroyed, vision is gradually lost.

(29) (B) Abrupt closure of the angle between the cornea and iris.

Acute closed angle glaucoma, also called acute glaucoma, occurs when the angle between the cornea and iris closes abruptly.

As a result, aqueous humor cannot access the drainage pathway, causing ocular pressure to rise rapidly.

- This is an ophthalmological emergency and patients can lose all vision in their eye within hours.

(30) (C) Acute closed angle glaucoma.

- Acute closed angle glaucoma is glaucoma associated with a physically obstructed anterior chamber angle.

It may be chronic or rarely acute.

Symptoms of acute closed angle glaucoma are severe ocular pain and redness, decreased vision, colored halos around light, headache, nausea and vomiting, and ocular pressure is elevated.

- Immediate treatment of the acute condition with multiple topical and systemic drugs is required to prevent permanent vision loss, followed by the definitive treatment iridotomy.

(31) (A) Acute closed angle glaucoma.

Patients with narrow angles in the acute stage present with periorbital pain and headache that are often severe.

It is usually not relieved by topical anesthetics and may radiate in the trigeminal nerve distribution. However, not all symptoms may vary in an acute attack; some patients, especially Africans, may have very little pain despite very high intraocular pressure. Blurred vision and colored halos around lights may progress to total visual loss. There may be a past history of transient blurring of vision and halos around lights suggesting mild subacute attacks.

In severe cases, systemic symptoms such as nausea, vomiting, sweating and bradycardia may be the main presenting features.

(32) (A) IV acetazolamide and topical pilocarpine.

Acute congestive glaucoma is also called acute closed angle glaucoma.

The treatment of acute closed angle glaucoma consists of intraocular pressure reduction, suppression of inflammation and the reversal of angle closure.

Once diagnosed, the initial intervention includes acetazolamide, a topical beta-blocker and a topical steroid.

Both acetazolamide and beta-blockers are thought to decrease aqueous humor production and to enhance opening of the angle.

Approximately 1 hour after beginning treatment, pilocarpine, a miotic that leads to opening of the angle, should be administered every 15 minutes for 2 doses.

(33) (C) Open angle glaucoma.

- Open angle glaucoma occurs due to obstruction to aqueous drainage within the trabecular meshwork and its drainage into the canal of Schlemm.
- Increasing age is a risk factor.
- Symptoms include asymptomatic initially, insidious, painless, gradual rise in intraocular pressure due to restriction of aqueous outflow, bilateral but usually asymmetric.
- Visual field loss (slow, progressive, irreversible loss of peripheral vision).
- Earliest signs are optic disc changes (increased cupping of disc).

(34) (D) Sterile cover and preparation for surgery.

- Lines of treatment of open globe injury include:
 - 1 - In initial treatment, do not give any eye drops (e.g. fluorescein, tetracaine or cycloplegics).
 - 2 - Ensure nothing per oral.
Assess and treat life-threatening injuries.
 - 4 - Avoid high dose ketamine if rapid sequence induction is required.
 - 5 - Do not remove any protruding foreign bodies.
 - 6 - Avoid eye manipulation that will increase intraocular pressure (e.g. lid retraction, intraocular pressure measurement or US)
- Place eye shield after initial eye examination.
- Put patient on bed rest with head of bed elevated to 30 degrees if hemodynamic condition allows.
Treat nausea and vomiting aggressively
- Provide sedation, as needed e.g. azepam 0.5 mg/intermittent bolus 2 mg
- Begin IV antibiotics
- Ensure definitive management by an ophthalmologist and urgent surgical repair, ideally within 24 hours of injury.

(35) (A) Retinal detachment.

- Retinal detachment symptoms are decreased peripheral or central vision, often described as a curtain or shadow crossing the field of vision
- Associated symptoms can include painless vision disturbances, including flashing lights and excessive floaters.

(36) (B) Proliferative retinopathy.

- Proliferative retinopathy occurs when very small blood vessels grow from the surface of the retina.
- These growing blood vessels are very delicate and bleed easily.
- It can bleed (vitreous hemorrhage), leading to blurred vision.
- Without laser treatment the bleeding can cause scar tissue that starts to shrink and pull the retina

(37) (D) Macular degeneration.

- Physiologic myopia develops in children sometime between 5-10-year-old and gradually progresses until the eye is fully grown.
- Pathologic myopia is a far less common abnormality, this condition begins as physiologic myopia, but rather than stabilizing, the eye continues to enlarge at an abnormal rate (progressive myopia).
- Acquired myopia occurs after infancy, this condition may be seen in association with uncontrolled diabetes and certain types of cataracts.

symptoms of myopia are reduced distance vision, eye discomfort, squinting and eye strain. Macular degeneration features no visual loss unless atrophy of the retinal pigment epithelial layer develops, which causes vision loss through loss of photoreceptors (rods and cones) in the central part of the eye.

(38) (B) It occurs more in far sighted than near sighted eyes.

Retina detachments can lead to visual loss, may be associated with congenital malformations, metabolic disorders, or trauma or may develop after eye surgery, typically a cataract extraction.

It occurs more often in myopic (near-sighted) eyes.

Myopic eyes are physically larger and longer than normal eyes and have thinner retinas at the periphery, this thin retina is more likely to break forming small holes and tears that may progress to a detachment.

(39) (C) Follow up with the patient next month to detect improvement.

This case is most likely to be macular degeneration (non-neovascular) because of decreased visual acuity, drusen formation with irregular pigmentations and no macular edema or neovascularization.

The proper course of action will be to monitor low vision, e.g. eyeglasses, anti-oxidants and zinc.

(40) (C) Central retinal vein occlusion.

Central retinal vein occlusion usually presents as sudden painless, variable visual loss. The fundus may show retinal hemorrhages, dilated tortuous retinal veins, cotton-wool spots, macular edema and optic disc edema.

Central retinal artery occlusion presents as an acute, sudden, painless, unilateral loss of vision and shows classic cherry red spots.

Retinal detachment; symptoms are decreased peripheral or central vision, often described as a curtain or shadow coming across the field of vision, associated symptoms can include painless vision disturbances including flashing lights and excessive floaters.

Diabetic retinopathy features no macular edema.

(41) (C) Optic neuritis.

The major symptom of optic neuritis is vision loss, frequently maximal within 1-2 days and varying from small 'fuzzy blurring' to complete blindness.

Eye pain is increased by eye movement,

The optic nerve can easily be visualized by an ophthalmoscope.

- If the optic nerve is swollen the condition is called papillitis.

(42) (A) Central retinal artery occlusion.

Cherry red spot is sign of retinal artery occlusion on funduscopy.

(43) (A) Open angle glaucoma.

- In people with glaucoma damage, because of increased pressure in the eye and/or loss of blood flow to the optic nerve, these nerve fibers begin to die.
- This causes the cup to become larger in comparison to the optic disc.
- Since the support structure is not there, optic nerve cupping progresses as the cup becomes larger in comparison to the optic disc.
- Closed angle glaucoma can appear suddenly and is often painful; visual loss can progress quickly, but the discomfort often leads patients to seek medical attention before permanent damage occurs.
- Open angle, chronic glaucoma tends to progress at a slower rate and patients may not notice they have lost vision until the disease has progressed significantly.

(44) (A) Painful loss of vision.

- It is sudden painless (except in temporal arteritis), unilateral loss of vision.

(45) (C) Hypertension and obesity.

- The risk factors that increase diabetic retinopathy background are hypertension, poor glucose control or long case diabetes mellitus, hyperlipidemia, renal disease and pregnancy (but not in gestational diabetes).

(46) (C) Diplopia and upward gaze.

- Orbital floor fractures can increase volume of the orbit with resultant hypoglobus and enophthalmos.
- The inferior rectus muscle or orbital tissue can become entrapped within the fracture, resulting in tethering and restriction of gaze and diplopia (especially in up gaze).
- The globe can be ruptured or suffer less severe forms of trauma, resulting in hyphema, retinal edema and profound visual loss.

(47) (A) Cataract

- Cataract is lens opacity with gradual, progressive, painless decrease in visual acuity.

(48) (B) Slit lamp with fluorescein stain.

- A corneal ulcer usually has an infectious etiology while the term corneal abrasion refers more to physical abrasions.
- Diagnosis is done by direct observation under magnified view of slit lamp revealing the ulcer on the cornea.
- The use of fluorescein stain, which is taken up by exposed corneal stroma and appears green, helps in defining the margins of the corneal ulcer and can reveal additional details of the surrounding epithelium.

(49) (B) Lid margin turns out towards globe.

- Entropion is a medical condition in which the eyelid (usually the lower lid) folds inward.
- It is very uncomfortable, as the eyelash constantly rub against the cornea and irritate it.
- Symptoms of entropion include redness and pain around the eye, sensitivity to light and wind, sagging skin around the eye, epiphora (overflow of tears onto the face) and decreased vision especially if

(50) (C) Penetrating foreign body.

- Blunt trauma to the eye can cause bleeding in the anterior chamber of the eye between the cornea and the iris.
- Intraocular foreign bodies do not cause pain because of the lack of nerve ending in the vitreous humour and retina that can transmit pain sensations.

(51) (A) 20/70.

- A Snellen chart is an eye chart used by eye care professionals and others to measure visual acuity.
- The traditional Snellen chart is printed with 11 lines of block letters.
- The first line consists of one very large letter, which may be one of several letters, for example E, H, or N.
- Subsequent rows have increasing numbers of letters that decrease in size.
- A person taking the test covers one eye and reads aloud the letters of each row, beginning at the top.
- The smallest row that can be read accurately indicates the visual acuity in that eye.
- In the most familiar acuity test, a Snellen chart is placed at a standard distance: 20 feet in the United States, or 6 meters in the rest of the world.

(52) (C) 20/60.

- 20/20 represents normal, average or even perfect vision.
- Visual acuity values are understood best by the following simple rule:
 - 1- On a Snellen chart, we determine the line that the person can just recognize.
 - 2- If that line is twice as large as the reference standard (20/20), we state that person's magnification requirement is 2x.
 - 3- If the magnification requirement is 2x, the visual acuity is 1/2 (20/40).
 - 4- So, in this case magnification requirement is 3x, which is 1/3 (20/60).

(53) (D) It needs surgical intervention.

- A pterygium is an elevated, superficial, external ocular mass that usually forms over the perilimbal conjunctiva and extends onto the corneal surface.
- Symptoms include redness, swelling, itching, irritation and blurring of vision associated with elevated lesions of the conjunctiva and contiguous cornea in one or both eyes.
- It cause distortion and/or reduction of central vision.
- Multiple different procedures have been advocated in the treatment of pterygium.
- These procedures range from simple excision to sliding flaps of conjunctiva with and without adjunctive external beta radiation therapy and/or use of topical chemotherapeutic agents.

(54) (B) 12 months.

- Screening for diabetes mellitus type 2 includes an initial eye examination shortly after diagnosis, then repeat annually.

(55) (D) Base skull fracture.

- Raccoon eye is bilateral periorbital accumulations of blood or other substances, often associated with anterior-posterior displacement type automobile accidents or basilar fractures of the skull.

(56) (D) Red eye associated with photophobia.

(57) (A) Cataract.

- The side effects of steroids include posterior subcapsular cataract.

(58) (B) Cataract surgery.

- Opacifications in both lenses, with decreasing of visual acuity are symptoms of cataract.

(59) (A) Astigmatism.

- Astigmatism is due to irregularity of the curvature of the cornea in various planes (uneven cornea), giving different degrees of refraction in different planes.
- Therefore, the image is in focus in some planes and blurred in other.
- This can be corrected by using cylindrical lenses, which gives additional refraction in the required meridian.

(60) (D) Amblyopia.

- This is a case of strabismus, but when strabismus is congenital or develops in infancy, it can cause amblyopia (lazy eye), in which the brain ignores input from the deviated eye.
- Even with therapy for amblyopia, stereoblindness (is the inability to see in three dimension-3D) may occur.

(61) (A) Dust.

- This is case of allergic conjunctivitis, which leads to corneal ulcer.
- Treatment of allergic conjunctivitis includes avoiding the allergen and antihistamines either topical or systemic.

(62) (A) Snellen chart

- Snellen chart is the best and the commonest way to measure the visual acuity.
- Use perimeter for visual field.
- Use Ishihara's chart for color vision.
- Use ophthalmoscope for retinal examination.

(63) (Q) Topical antibiotic, cycloplegic eye drops.

- Because infection is a common occurrence in corneal ulcers, it should be prescribing topical antibiotic (eye drops).
- Cycloplegic eye drops are mydriatic (pupil dilating) agents and are used as such during eye examination to better visualize the retina.
- Oral pain medications will be prescribed to control the pain.
- If the ulcer cannot be controlled with medications or if it threatens to perforate the cornea, it may require an emergency surgical procedure known as corneal transplant.

(64) (A) Optic neuritis.

- The major symptom of optic neuritis is vision loss, frequently maximal within 1-2 days and varying from a small area of blurring to complete blindness.
- Sufferers also experience eye pain that is worsened by eye movement

(65) (B) Mechanical irritation of retina.

- This is case of photopsia.
- Photopsia can be directly induced by mechanical, electrical, or magnetic stimulation of the retina or visual cortex as well as by random firing of cells in the visual system.

(66) (B) Stop smoking.

- Dry eye syndrome is one of the most common complaints among middle-aged and older adults.
- It becomes more common with age.
- It usually occurs in people who are otherwise healthy.
- This can occur due to hormonal changes that make the eyes produce fewer tears.
- Other common causes of dry eyes include a dry environment or workplace (wind, air conditioning), sun exposure, smoking or second-hand smoke exposure and cold or allergy medicines.
- The first step in treatment is artificial tears.
- Other helpful steps include stop smoking and avoid second-hand smoke, direct wind and air conditioning; use of a humidifier especially in the winter; limiting allergy and cold medicines that may lead to dry eye and worsen symptoms and purposefully blinking more often.

(67) (A) Temporal arteritis.

- Headache is the most common chief complaint and presents in over 2/3 of patients with temporal arteritis.
- Vision loss may also be a presenting symptom and can be sudden and painless.
- Initial visual symptoms are usually transient and intermittent, typically manifesting as unilateral visual loss or occasionally diplopia.
- However if left untreated, permanent blindness frequently results.
- ESR is a nonspecific marker of inflammation, it is the most commonly used laboratory test in diagnosing temporal arteritis.
- CRP has been found to be elevated (>2.45 mg/dl) in patients with temporal arteritis, even in patients with a normal ESR.

(68) (C) Cranial nerve VI.

- The lateral rectus muscles abduct the eye (away from the nose).
- Cranial nerve VI supplies lateral rectus muscle.
- In a complete injury of the abducens nerve, the affected eye is turned medially.
- In an incomplete injury, the affected eye is seen at midline at rest, but the patient cannot abduct the eye laterally.

(69) (B) Ethambutol.

- Ethambutol may cause side effects like loss of appetite, upset stomach, vomiting, numbness and tingling in the hands or feet.
- Serious side effects may occur like vision changes (such as blurred/decreased vision, color blindness, especially inability to see the colors red and green), symptoms of liver disease (such as persistent nausea/vomiting, unusual tiredness/weakness, severe stomach/abdominal pain, yellowing eyes/skin, dark urine), numbness/tingling of arms/legs, toe/joint pain.

(70) (B) 1 week.

- A capillary hemangioma occurs in the outer layers of the skin and is often called a strawberry birthmark.
- A cavernous hemangioma occurs in the deeper layers of the skin or around the eye.
- Capillary hemangiomas can occur on the eyelids, on the surface of the eye (conjunctiva) or in the eye socket (orbit).
- When that happens, the hemangioma may interfere with the normal development of the eye and

Abbreviations

Abbreviations	Meaning
°C	Centigrade.
MI	Microliter.
ABC	Airway, Breathing and Circulation.
ABCD	Airway, Breathing, Circulation and Drug/Disability.
ABCDE	Airway, Breathing, Circulation, Drug/Disability and Exposure/Environment control.
ABG	Arterial blood gases.
AIDS	Acquired immunodeficiency syndrome.
ANA	Antinuclear antibody.
AP	Anterior posterior.
AV node	Atrioventricular node.
BCG	Badlle calmette guerin.
BMI	Body mass index.
BP	Blood pressure.
bpm	Beat per minute.
BUN	Blood urea nitrogen.
C3	Complement 3.
cal	Calories.
CBC	Complete blood count.
CC	Cubic centimeter.
cm	Centimeter.
CPR	Cardiopulmonary resuscitation.
CRP	C reactive protein.
CSF	Cerebrospinal fluid.

Abbreviations

Abbreviations	Meaning
CT	Computed tomography.
CTG	Cardiotocography.
DBP	Diastolic blood pressure.
Desmopressin	Desamino-8-D-arginine vasopressin.
DIC	Disseminated intravascular coagulation.
DIP	Distal interphalangeal joint.
di	Deciliter.
DM	Diabetes mellitus.
DM-1	Diabetes mellitus type 1.
DM-2	Diabetes mellitus type 2.
DNA	Deoxyribonucleic acid.
DPT	Diphtheria, Pertussis, Tetanus.
DVT	Deep venous thromobis.
E. coli	Escherichia coli.
ECG	Electrocardiography.
EEG	Electroencephalography.
ELISA	Enzyme-linked immunosorbent assay.
ENT	Ear, Nose, Throat.
ER	Emergency room.
ESR	Erythrocyte sedimentation rate.
FBS	Fasting blood sugar.
FEV1	Forced expiratory volume in 1 second.
fl	Femtoliter.

Abbreviations

Abbreviations	Meaning
IV	Intravenous.
K	Potassium.
Kcal	Kilocalories.
KCL	Potassium chloride.
kg	Kilogram.
KOH	Potassium hydroxide.
KUB	Kidneys, ureter and bladder x-ray.
L	Liter.
LDL	Low density lipoprotein.
meg (pg)	Microgram.
MCH	Mean corpuscular hemoglobin.
MCHC	Mean cell hemoglobin concentration.
mcl	Cells per microliter.
MCV	Mean cell volume.
mEq	Milliequivalents.
mg	Milligram.
min	Minute.
mill	Million international unit.
ml	Milliliter.
mm	Millimeter.
mm³	Cubic millimeter.
mmHg	Millimeter of mercury.
mmol	Millimole.

Abbreviations

Abbreviations	Meaning
MMR	Measles, Mumps, Rubella.
mOsm	Milliosmole.
MR1	Magnetic resonance imaging.
mRNA	Messenger Ribonucleic acid.
mV	Millivolts.
Na	Sodium.
NaCl	Sodium Chloride.
NaHCO₃	Sodium bicarbonate.
ng	Nanogram.
NS	Normal saline.
NSAIDs	Nonsteroidal anti-inflammatory drugs.
NSTEMI	Non-ST-segment elevation myocardial infarction.
OR	Operation room.
pH	Power of hydrogen.
PHC	Primary health care.
PSA	Prostate specific antigen.
PT	Prothrombin time.
PTT	Partial thromboplastin time.
RBCs	Red blood cells.
RBS	Random blood sugar
RNA	Ribonucleic acid.
RR	Respiratory rate.
RTA	Road traffic accident.

Abbreviations

Abbreviations	Meaning
SI	First heart sound.
S2	Second heart sound.
SBP	Systolic blood pressure.
SC	Subcutaneous.
STEMI	ST-segment elevation myocardial infarction.
T3	Triiodothyronine.
T4	Thyroxine.
TB	Tuberculosis.
TIBC	Total iron binding capacity.
TLC	Total lung capacity.
TRH	Thyrotropin releasing hormone.
TSH	Thyroid stimulating hormone (thyrotropin).
U	Unit.
US	Ultra sound.
V2	Vasopressin 2 receptor.
VF (ECG)	Left foot.
VL (ECG)	Left shoulder.
VLDL	Very low density lipoprotein.
VR (ECG)	Right shoulder.
WBCs	White blood cells.

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